Colleges and the Educational Spectrum

Colleges and Schools

Background Papers

VISION 2000

Colleges and
the Educational
Spectrum

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Vision 2000
A Review of the Mandate of the Colleges of Applied Arts and Technology

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VISION 2000

October 1989

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Vision 2000 is a review of the mandate of Ontario's Colleges of Applied Arts and Technology. It is coordinated by the Ontario Council of Regents and was initiated by the Minister of Colleges and Universities in October of 1988.

A Steering Committee, with broad-based representation, was established to guide the Vision 2000 process. Consultation, with a wide variety of stakeholders, and research was handled by five study teams. Study Team 1's task was to provide an empirical snapshot of the current college system and its external environment. Researchers from Study Team 2 examined the role of colleges in our changing economy, while Study Team 3 looked into ways that the college system could promote access and educational support for diverse learners. Study Team 4's purpose was to study the challenging interrelationships of quality, accessibility and efficiency. For Study Team 5 the research and consultation focussed on the linkages between colleges and other educational institutions.

The background papers in this volume are part of a number of publications prepared by researchers for Vision 2000. These papers do not necessarily represent the views of the Study Teams, the Vision 2000 Steering Committee, or the Ontario Council of Regents.

Together the background papers are meant to provide a broad base of ideas as part of the input for the deliberations of the study teams and the Steering Committee.

Ontario Council of Regents
Ministry of Colleges and Universities
790 Bay Street, 10th Floor
Toronto, Ontario
M5G 1N8

(416) 965-4234
Fax: (416) 963-1278

Ontario

Communications Coordinator
Catherine Clement

Colleges and
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Spectrum

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Background Papers

Jo Oppenheimer

The Relationship Between Schools and Colleges Report on Consultations

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Felicity Corelli

Summary of Submissions Received in Response to "An Invitation to Participate"

October 1989

Study Team 5 Members

Chair
Penny Moss

Executive Officer
Starr Olsen

Members
Eileen Burrows
Malcolm Campbell
Diane Chevalier
Bill Conrod
Diane Crocker
Susan Davey
Brian Desbiens
Terry Grier
Mark Larratt-Smith
Bert Martin
Ian McLellan
Vicki Milligan
Ed Monahan
Desmond Morton
George Pedersen
Brenda Protheroe
Peter Stokes
Jim Turk
Scott Turner

Vision 2000
Harv Honsberger
Craig McFadyen
Riel Miller
Brian Wolfe

Colleges and
the Educational
Spectrum

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Background Papers

Jo Oppenheimer
Oppenheimer Research Associates

The Relationship Between Schools and Colleges

Study Team 5

The Relationship Between Schools and Colleges

Summary

This paper surveys some of the constituent elements of the college system and some of its relevant relationships. It reviews the roles and mandates for the secondary schools and colleges in Ontario; the students who have been served by the colleges, the people who may need to be served in the future and the role the schools and colleges must play in meeting the needs of a changing workforce; issues of access, competence and success; and the relationships existing among the educational systems.

Information comes primarily from four sources: in-depth interviews with representatives of secondary schools, colleges, the Ministry of Education, the Ministry of Colleges and Universities, government and labour; exchanges with close to a hundred people who are directly involved with educational activities or providing services to educators; primary documents, research reports and articles related to the various topics; and statistical data from the Vision 2000 Environmental Scan, the colleges, the Ministry of Colleges and Universities, the Ministry of Skills Development and the Ministry of Education.

The colleges, as presented to the Legislature on May 21, 1965 by Ontario's Minister of Education, the Honourable William Davis, were to "offer programs of instruction in one or more fields of vocational, technological, general and recreational education and training in day or evening courses and for full-time or part-time students." They were "planned to meet the relevant needs of all adults within a community, at all socio-economic levels, of all kinds of interests and aptitudes, and at all stages of educational achievement." The structure was modeled after the institutes of technology and vocational centres and not like the American junior colleges or those in Alberta which offered university-parallel courses. There were three conditions of admission: an Ontario Secondary School graduation diploma, an Ontario Secondary School honour graduation diploma, or the attainment of the age of nineteen years. In 1967, as eighteen colleges were opening, Davis announced four basic operating principles for the colleges:

- they must embrace total education, vocational and avocational, regardless of formal entrance qualifications, with provision for complete vertical and horizontal mobility;
- they must develop curricula that meet the combined cultural aspirations and occupational needs of the student;
- they must operate in the closest possible cooperation with business and industry, and with social and other public agencies, including education, to ensure that curricula are at all times abreast, if not in advance of the changing requirements of a technological society;
- they must be dedicated to progress, through constant research, not only in curricula but in pedagogical technique and in administration.

Secondary education in Ontario is governed by the *Education Act*, the *Regulations*, and *Schools General: Foundations for Curriculum in the Elementary and Secondary Schools in Ontario.* The 1984 circular *Ontario Schools: Intermediate and Secondary Divisions* (OS:IS) sets forth specific goals, policies and requirements for programs and curricula for grades seven to thirteen. OS:IS states that the role of secondary education is "primarily directed to preparing young adolescents both to develop the independence they need to act as concerned and compassionate citizens and to continue on to post-secondary studies wherever they have an interest and capability to do so."

Both the mandate for the colleges and the mandate for secondary education have, in general, been realized although both systems could benefit from improvement. Interviewees and other educators were virtually unanimous in their conviction that greater co-operation and collaboration between the two sectors is necessary in order to provide quality education in Ontario.

Statistical data indicate that 95,043 students were enroled in full-time post-secondary programs in the colleges in the fall of 1988. This enrolment represents an increase of almost 50% in the past decade. For the past five years, full-time post-secondary enrolment has remained relatively constant in the central, eastern and northern regions while the western region has experienced a decline. Business programs continue to be the most in demand and have experienced a slight increase in the decade as have health and applied arts. Between 1983 and 1988 enrolment in technology has declined by 30%. Divisional differences vary by region and college and indicate that specialization has taken place in the colleges.

An average of 50% of students enter college with a grade 12 secondary school diploma. The percentage of grade 12 graduates has been increasing while the percentage of grade 13 graduates has declined. A small number of students enter college with less than a secondary diploma. Some enter from university, other post-secondary, apprenticeship or non-post-secondary programs. A few enter with other qualifications. The 17- to 24-year-old group accounts for 82% of the total of full-time post-secondary enrolment. Enrolment of 25- to 34-year-olds and over 35-year-olds has increased marginally during the past decade. More women than men have enroled in full-time college studies. The number of women attending college has continued to grow and the number of men has declined since 1984. On average, 85% of full-time post-secondary students speak English as their first language. French has declined by almost 40% and people with "other" native tongues have increased by over 50%. In the central region, the net increase this decade of people with "other" native tongues is 386%.

Enrolment in full-time training programs declined by 21.5% in the five years between 1983 and 1987. Enrolment in direct purchase training programs declined by 54%, tuition short declined by 23% and apprenticeships increased by 37%. Part-time activity, as a function of the number of entrants, has increased by 44% during the past decade to an all-time high of 563,019 students in 1987. Between 1983 and 1987, part-time entrants in post-secondary programs have decreased by 1.9% while participation in non-post-secondary has increased by 39%.

Full-time post-secondary college enrolments are projected to remain stable through 1991, fall by 5% between 1991 and 1997, and make a gradual recovery between 1998 and 2005. The determination of participation rates is extremely difficult because of the many variables and assumptions that are required. Analysis of social factors indicates that the age-specific "benchmark" projections of the College Affairs Branch of MCU may be low.

There is already a need for multiple entry and re-entry points in college programs and present estimates of skilled labour shortfalls combined with current government policy with regard to immigration indicate that there will be greater need for adult training and retraining in the future. There is also a critical need for multiple entry and re-entry points in secondary schools.

While students are not identified by the Ministry of Education as basic, general or advanced level students and records of enrolment are not kept according to level, it is unanimously agreed that students who take most of their secondary courses at the basic level are not served by the colleges. It is also widely believed that the colleges prefer students who take most of their courses at the advanced level. Seven of the colleges state that their minimal entrance requirement for all programs is an OSSD at or above the general level and another 10 colleges state either that a majority of courses must be at the general or advanced level or that they require general or advanced standing for almost all of their programs.

College programs are developed in conjunction with business, industry and professional organizations. Secondary school personnel have seldom participated on program advisory committees. Any relationship between secondary school and college programming is largely coincidental. Differences have been found to exist between stated and functional pre-requisites and secondary school programs often have not been assessed for college program requirements.

There are eight principal channels for the distribution of information on college program pre-requisites to secondary school personnel. Whether the materials are used cannot easily be determined. Accessibility to information by students and their parents is thought to be limited. Due to the many variations in prerequisites and programs, students and guidance counsellors find the process of college selection and application too confusing and time consuming.

Presently there are no standard techniques used by all colleges to determine whether new students have the skills to succeed in college programs. There is a discrepancy between the admissions procedures prescribed by Davis and the actual procedures. Secondary school student assessment is determined by individual teachers under the supervision of department heads and principals. Teacher assessment and the absence of standardized testing in secondary schools is current Ministry of Education policy.

College attrition cannot be equated with a lack of student academic preparation. A recent study at one college identified four distinct groups, three of which had special needs. Data on reading test scores from four colleges indicate that the number of full-time post-secondary students reading below grade 10 level is between 16.5% and 35.6%. A comprehensive study of student support services has not been yet been done but preliminary investigation indicates that the requirement for or the provision of remedial programming is not consistent in the college system. Minimal estimates for the cost of providing remedial programs for all who need it is about $16.8 million per year. Human resource development for secondary and college personnel has been identified as an essential key to student success.

A clear consensus exists around the belief that educators must be partners - collaborators - working together in the provision of quality education. Financial constraints, the need to support lifelong learning and the need for better information exchange were cited as reasons underlying the need for collaborative relationships. Curriculum, career counselling, faculty, facility and human resource development are areas which could benefit from joint mandates. Many innovative "voluntary" relationships between secondary schools and colleges have been noted. Three ministry co-ordinated initiatives — co-op, SWAP and Linkage II — have been defined. Much interest has been expressed in articulation agreements. Four Ontario colleges are presently involved, to varying degrees, with developing agreements with secondary schools in their catchment areas. Several governance problems have been identified.

Sommaire

Le présent document analyse les différents éléments du réseau collégial et certaines relations pertinentes entre ces éléments. Il traite également du rôle et du mandat des écoles secondaires et des collèges de l'Ontario; des personnes qui ont utilisé les services des collèges et celles qui les utiliseront; du rôle que les écoles et les collèges doivent jouer pour répondre aux besoins changeants de la main-d'œuvre; des questions relatives à l'accessibilité, à la compétence et au succès; de même que des relations qui existent au sein du système d'éducation.

Les renseignements qui ont permis de faire cette analyse proviennent des quatre sources suivantes : des entrevues approfondies avec des représentants des écoles secondaires, des collèges, du ministère de l'Éducation, du ministère des Collèges et Universités, du gouvernement et des syndicats; des échanges avec près d'une centaine de personnes participant directement à des activités pédagogiques ou offrant des services aux éducateurs; des documents, rapports et articles traitant des différents sujets; des statistiques provenant de l'analyse du milieu préparée par Vision 2000, des collèges, du ministère des Collèges et Universités, du ministère de la Formation professionnelle et du ministère de l'Éducation.

Les collèges, tels que définis à l'Assemblée législative, le 21 mai 1965, par le ministre de l'Éducation de l'Ontario, l'honorable William Davis, devaient offrir «des programmes d'études dans un ou plusieurs domaines de la formation professionnelle, technologique et générale, des cours de formation de jour et du soir à l'intention d'étudiants à temps plein et à temps partiel.» Ils devaient également «prendre des mesures pour répondre aux besoins des adultes et des collectivités, de tous les niveaux socio-économiques, de tous les genres d'intérêts et d'aptitudes et à tous les niveaux de formation.» La structure des collèges a été élaborée sur le modèle des instituts technologiques et des centres de formation professionnelle et non sur celui des collèges américains ou de l'Alberta qui offrent des cours universitaires parallèles. Trois critères d'admissibilité ont été déterminés : posséder un diplôme d'études secondaires de l'Ontario, un diplôme d'études préuniversitaires de l'Ontario ou être âgé de 19 ans. En 1967, lors de l'ouverture de 18 collèges, M. Davis a énoncé les quatre principes guidant le fonctionnement des collèges :

- ils doivent toucher l'ensemble de l'éducation, professionnelle et autre, quels que soient les critères d'admissibilité, et assurer une mobilité verticale et horizontale;
- ils doivent élaborer des programmes d'études répondant à la fois aux besoins culturels et professionnels des étudiants;
- ils doivent collaborer le plus étroitement possible avec les entreprises, les industries et les organismes gouvernementaux, y compris ceux du milieu de l'éducation, pour que leurs programmes d'études suivent, sinon devancent, les changements nécessaires dans une société technologique;
- ils doivent favoriser le progrès en effectuant des recherches non seulement dans le domaine des programmes d'études, mais aussi au sujet des méthodes pédagogiques et de l'administration.

En Ontario, l'éducation secondaire est assurée en vertu de la *Loi sur l'éducation*, des règlements qui en découlent et des normes d'élaboration des programmes d'études des cycles élémentaires et secondaires de l'Ontario. La circulaire de 1984 intitulée *Les écoles de l'Ontario aux cycles intermédiaires et supérieurs* établit les objectifs visés, les politiques et les exigences particulières des programmes d'études destinées aux élèves de la 7^{e} à la 13^{e} années. Le document *Les écoles de l'Ontario* précise que le rôle de l'éducation secondaire consiste «principalement à préparer les adolescents à acquérir l'indépendance dont ils ont besoin pour devenir des citoyens responsables et poursuivre des études postsecondaires lorsque cela les intéresse ou s'ils possèdent les aptitudes requises.»

De façon générale, les mandats respectifs de l'éducation collégiale et secondaire ont été respectés, même s'il y a place pour des améliorations dans les deux cas. Les personnes interviewées et les enseignantes et enseignants ont exprimé leur conviction, de façon presque unanime, qu'une plus grande collaboration est nécessaire entre les écoles secondaires et les collèges pour assurer une éducation de qualité en Ontario.

Les statistiques révèlent qu'à l'automne 1988, 95 043 étudiants étaient inscrits à temps plein aux programmes d'études postsecondaires dans les collèges. Ceci représente une augmentation de près de 50 pour 100 au cours de la dernière décennie. Au cours des cinq dernières années, les inscriptions à temps plein dans les établissements d'enseignement postsecondaire sont demeurées relativement constantes dans les régions du Centre, de l'Est et du Nord de la province, tandis qu'elles ont diminué dans la région de l'Ouest. Les programmes d'études commerciales sont toujours les plus populaires et les inscriptions à ces programmes ont connu une légère hausse au cours de la décennie, tout comme celles aux programmes d'études des sciences de la santé et des arts appliqués. De 1983 à 1988, les inscriptions aux programmes d'études technologiques ont diminué de 30 pour 100. Les différences dans les taux d'inscription varient entre les régions et les collèges, ce qui indique qu'un certain degré de spécialisation s'est produit dans les collèges.

En moyenne, 50 pour 100 des étudiants qui entreprennent des études collégiales possèdent un diplôme d'études secondaires de 12^{e} année. Toutefois, la proportion de diplômés de 12^{e} année a augmenté, tandis que celle des diplômés de 13^{e} année a diminué. Un petit nombre d'étudiants entreprennent leurs études collégiales sans posséder un diplôme d'études secondaires. Certains proviennent d'universités, d'autres établissements d'enseignement postsecondaire, des programmes d'apprentissage ou de programmes d'études autres que postsecondaires. Quelques étudiants entreprennent leurs études collégiales en possédant d'autres qualifications. Le groupe d'âge de 17 à 24 ans représente 82 pour 100 des étudiants postsecondaires à temps plein. Le nombre d'étudiants faisant partie des groupes d'âge de 25 à 34 ans et de 35 ans et plus a connu une légère hausse au cours de la dernière décennie. Par ailleurs, les femmes s'inscrivent en plus grand nombre que les hommes aux programmes d'études collégiales à temps plein. Depuis 1984, le nombre de femmes dans les collèges augmente de façon constante, tandis que celui des hommes diminue. En moyenne, 85 pour 100 des étudiants postsecondaires à temps plein sont de langue maternelle anglaise. Le nombre d'étudiants de langue française a diminué de près de 40 pour 100, alors que celui des personnes ayant «une autre» langue maternelle a augmenté de plus de 50 pour 100. Dans la région du Centre, l'augmentation nette du nombre de personnes faisant partie de cette dernière catégorie a été de 386 pour 100 au cours de la présente décennie.

Au cours des cinq années de 1983 à 1988, les inscriptions à temps plein aux programmes de formation professionnelle ont connu une baisse de 21,5 pour 100. Les inscriptions aux cours de formation achetés directement ont diminué de 54 pour 100, celles aux cours de formation de courte durée ont baissé de 23 pour 100 et celles aux programmes d'apprentissage ont augmenté de 37 pour 100. Au cours de la dernière décennie, les activités à temps partiel par rapport au nombre d'étudiants inscrits se sont accrues de 44 pour 100 pour atteindre un niveau sans précédent de 563 019 étudiants en 1987. De 1983 à 1987, le nombre d'étudiants à temps partiel inscrits aux programmes d'études postsecondaires a diminué de 1,9 pour 100, tandis que le nombre d'étudiants inscrits aux programmes autres que postsecondaires a augmenté de 39 pour 100.

On prévoit que d'ici 1991, les inscriptions à temps plein dans les collèges demeureront stables, qu'elles diminueront de 5 pour 100 entre 1991 et 1997 et augmenteront graduellement de 1998 à 2005. Toutefois, il est extrêmement difficile de déterminer le taux de participation en raison des nombreuses variables et hypothèses devant être utilisées. L'analyse des facteurs sociaux indique que les prévisions se rapportant aux groupes d'âge établies par la Direction des affaires collégiales du MCU peuvent être sous-évaluées.

Il existe déjà un besoin de points d'entrée multiples et de réinscription aux programmes d'études collégiales. En outre, les prévisions à l'égard des pénuries de main-d'œuvre qualifiée et les politiques gouvernementales relatives à l'immigration indiquent que les besoins en matière de formation et de recyclage des adultes prendront de l'importance. Il existe également un besoin de points d'entrée multiples et de réinscription aux écoles secondaires.

Même si le ministère de l'Éducation n'identifie pas les étudiants selon les niveaux fondamental, général ou avancé et que les statistiques ne sont pas compilées selon le niveau des étudiants, il est unanimement reconnu que la plupart des étudiants faisant des études secondaires au niveau fondamental ne s'inscrivent pas par la suite aux programmes d'études collégiales. On croit aussi généralement que les collèges préfèrent recevoir des étudiants qui ont fait la plupart de leurs études au niveau avancé. Sept des collèges ont indiqué que leurs exigences minimales d'admissibilité pour tous les programmes est le diplôme d'études secondaires de l'Ontario de niveau général ou avancé. Dix autres collèges ont indiqué que les étudiants voulant s'inscrire doivent avoir suivi la plupart de leurs cours au niveau général ou avancé ou qu'ils exigent que les étudiants aient fait des études au niveau général ou avancé pour que ceux-ci puissent s'inscrire à presque tous leurs programmes.

Les programmes d'études collégiales sont élaborés en collaboration avec les entreprises, les industries et les organismes professionnels, tandis que le personnel des écoles secondaires participe rarement aux comités consultatifs sur l'élaboration des programmes. Les relations entre les écoles secondaires et les collèges sont surtout de nature accidentelle. Par ailleurs, on a constaté des différences entre les exigences énoncées en matière d'admissibilité et la situation réelle et le fait que les programmes d'études secondaires ne sont pas évalués par rapport aux exigences des programmes d'études collégiales.

Il existe huit moyens permettant de distribuer au personnel des écoles secondaires les renseignements relatifs aux exigences d'admissibilité des collèges. Toutefois, il est difficile de déterminer si ce matériel est utilisé. On croit que les étudiants et leurs parents ont un accès limité à ces renseignements. En raison des nombreuses différences qui existent à l'égard des exigences et des programmes, les étudiants et les orienteurs considèrent que le processus conduisant au choix d'un collège et à l'inscription est très confus et exige beaucoup trop de temps.

À l'heure actuelle, il n'existe aucune norme commune permettant aux collèges de déterminer si les nouveaux étudiants possèdent les aptitudes requises pour réussir leurs études collégiales. Il y a également une différence dans les procédures d'admissibilité stipulées par M. Davis et celles présentement utilisées. L'évaluation des élèves du secondaire est effectuée individuellement par les enseignantes et enseignants, sous la supervision des directeurs de départements et d'écoles. L'évaluation effectuée par les enseignantes et enseignants et l'absence de normes à ce sujet découlent des politiques actuelles du ministère de l'Éducation.

La diminution du nombre d'étudiants dans les collèges ne peut être attribuée à une préparation insuffisante de leur part. Une étude récente effectuée dans un collège a permis d'identifier quatre groupes d'étudiants, dont trois ont des besoins particuliers. Les statistiques sur les examens de lecture dans quatre collèges révèlent que la proportion d'étudiants à temps plein ayant un niveau de lecture inférieur à celui de la 10^{e} année varie de 16,5 pour 100 à 35,6 pour 100. Même si les résultats d'une étude approfondie des services de soutien aux étudiants ne sont pas encore disponibles, une analyse préliminaire indique que les exigences relatives aux programmes de rattrapage et la prestation de tels programmes sont inégales au sein du réseau collégial. Les évaluations du coût de prestation de programmes de rattrapage pour toutes les personnes qui en ont besoin s'élèvent à un minimum de 16, 8 millions de dollars par année. Par ailleurs, le développement des ressources humaines au sein des écoles secondaires et des collèges a été identifié comme un facteur indispensable à la réussite des étudiants.

Il existe un consensus à l'effet que les éducateurs devraient être des partenaires et des collaborateurs pour assurer des services d'éducation de qualité. Les contraintes financières ainsi que la nécessité d'appuyer l'éducation permanente et d'assurer un meilleur échange d'information sont les raisons mentionnées pour justifier cette approche. Les programmes d'études, l'orientation professionnelle, les enseignantes et enseignants, les installations et le développement des ressources humaines sont des aspects qui bénéficieraient d'un mandat conjoint. Plusieurs relations «spontanées» entre les écoles secondaires et les collèges ont été remarquées. Des initiatives coordonnées par trois ministères, comme le Programme d'éducation coopérative, le Programme de stages en milieu de travail et le programme Liaison II ont été élaborées. En outre, un intérêt marqué a été manifesté à l'égard d'ententes éventuelles de collaboration. Quatre collèges ontariens participent présentement, à divers degrés, à l'élaboration d'ententes avec les écoles secondaires faisant partie de la région qu'ils desservent. Plusieurs problèmes administratifs ont été identifiés à ce sujet.

Table of Contents

Page

Forward 1

Section 1: Roles and Mandates of Schools and Colleges

Introduction 2

1.1 The Defined Roles and Mandates of Secondary Schools and Colleges 2

Secondary Education 2

College Education 4

Historical Notes 6

1.2 The Intended Relationship Between Secondary Schools and the Colleges 7

1.3 The Realization of the Mandates 8

The Secondary School Mandate 8

The College Mandate 9

1.4 The Current Relationship Between Schools and Colleges 12

1.5 Redefinition of the Relationship 13

Section 2: The Students: Past, Present and Future

Introduction 14

2.1 Who Attends College 15

Full-time Post-secondary Enrolment 15

Full-time Co-op Enrolment 17

Full-time Training Enrolment 17

Part-time Enrolment 18

2.2 Future College Participation 19

2.3 Potential Clients 23

2.4 The Need for Multiple Entry and Re-entry 24

2.5 Significant Factors in Choosing College Programming 26

2.6 The Role of Student Choice in Determining School and College Programming 27

2.7 Responsibilities of Schools and Colleges in Providing Options to Clients 28

Section 3: Access, Competence and Success

Introduction 30

3.1 Access to College Programming 31

3.2 Program Relationships Between Secondary Schools and Colleges 32

3.3 Stated Program Pre-requisites and Functional Pre-requisites 33

3.4 Communication of College Pre-requisites 34

3.5 College Assessment Techniques 35

3.6 Secondary School Assessment Techniques 36

3.7 Student Preparation for College 37

3.8 Human resource development strategies for student success 43
Human resource development for secondary personnel 44
Human resource development for college personnel 44
3.9 College 'Readiness' Programs 47
3.10 Funding Implications of Readiness Programs 49

Section 4: Relationships and Potential Links Between Schools and Colleges

Introduction 51
4.1 The Need for Collaborative Relationships Between Schools and Colleges 51
4.2 Areas Which Could Benefit from Joint Mandates 52
Curriculum 52
Career counselling 53
Teaching Faculty 54
Facilities 54
Human Resource Development 54
4.3 Areas of Continued Competition Between Schools and Colleges 55
4.4 Some Innovative Relationships 56
Co-op 56
SWAP 56
Linkage II 57
Professional Development Programs 57
College Counselling 58
Career Counselling 58
4.5 Models for Articulation 60
Articulation Models in Ontario 60
Articulation Models in Canada 62
Articulation Models in Other Countries 65
4.6 The Implications of Articulation Agreements with Regard to Governance 66
Appendix 69
Bibliography 85

"There should be some risk taking, there should be some courage shown." *(Vision 2000 Interview)*

Foreword

Perhaps one of few certainties within education, and its significance is not to be underestimated, is that change is occurring in many forms, in many directions and on many fronts simultaneously. Simple answers and simple solutions are a thing of the past, if indeed they ever were. Nevertheless, as John Robarts pointed out, "Without change ... there can be no improvement."[1]

In this paper, we will be looking at some of the constituent elements of the college system and some of its relevant relationships. In the first section, we will review the roles and mandates for the secondary schools and colleges in Ontario. In the next section, we will be considering the students who have been served by the colleges, the people who may need to be served in the future and the role the schools and colleges must play in meeting the needs of a changing workforce. In section three, we will ponder over issues of access, competence and success. And finally, we will look at the relationships existing among the educational systems and ask whether they are adequate. The question ever before us is whether the mandate of the colleges, as it stands, is able to meet the needs of the future or whether it needs redefinition.

Information presented in this series comes primarily from four sources: in-depth interviews with representatives of secondary schools, colleges, the Ministry of Education, the Ministry of Colleges and Universities, government and labour; exchanges with close to a hundred people who are directly involved with educational activities or providing services to educators; primary documents, research reports and articles related to the various topics; and statistical data from the Vision 2000 Environmental Scan, the colleges, the Ministry of Colleges and Universities, the Ministry of Skills Development and the Ministry of Education. There are several acknowledged limitations of this methodology. First, interviews and people contacted were, by the constraints of time and finances, restricted to those within easy access. This tended to confine examples, especially of innovative programs, to those in the colleges in the southern portion of the province. Second, time restrictions also meant that thorough literature reviews were impossible and the researcher had to depend on team members and other contacts for references to the literature that was reviewed. And third, time and space restrictions were also in conflict with the attempt to include many significant topics.

Please note that no attempt has been made to present a singular, cohesive argument; the research assignment has been to prepare a document which covers a number of discrete areas. When determining policy options, the reader is reminded that information in this document is not complete and is meant chiefly to stimulate thought and discussion.

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[1] Quoted from a statement by the Premier, John. P. Robarts, to the Provincial Assembly on February 23, 1965, by William Davis, *Basic Documents Relating to Colleges of Applied Arts and Technology*, (Toronto, 1966), p.7.

Section 1: Roles and Mandates of Schools and Colleges

Introduction

In 1965 the Honourable William Davis presented to the Legislature an argument for an entirely new level of education for Ontario: a college system. In his presentation, he outlined what he saw as the principle needs for a college and his vision of the new system. In 1967 eighteen colleges of applied arts and technology opened, built upon the previously existing institutes of technology and vocational centres. Today there are twenty-three CAATs in Ontario directly serving the needs of approximately 95,000 full-time and 563,000 part-time students a year, meeting Ontario's needs for a skilled labour force and, more generally, fulfilling the requirements of individuals, business, industry and society.

The world has changed vastly since 1965 and promises to continue changing in ever quickening ways. The challenge before us in Vision 2000 is to determine whether the mandate given to the colleges in 1965 was insightful enough to have anticipated our current needs and the needs of the future. In the past we tended to think atomistically about education, that is, we thought education consisted of a multitude of pieces and all we had to do was to define and work on the pieces. Now educators are beginning to see that the pieces are part of a whole system and that unless we define and work on the whole, the pieces may not fit the way we want them to and, indeed, the system may fail to work. In terms of the colleges, we must now ask whether the mandate and the realization of it did envisage the whole and did define the relationships that are necessary for the system while not losing sight of the needs of both individuals and society.

1.1 The Defined Roles and Mandates of Secondary Schools and Colleges of Applied Arts and Technology

Secondary Education

Various general aspects of the mandate for secondary education in Ontario are set out in the *Education Act*, the *Regulations*, and *Schools General: Foundations for Curriculum in the Elementary and Secondary Schools in Ontario*. The responsibilities of teachers, principals and supervisory officers are described in these documents with respect to the use of circulars and curriculum guidelines issued by the Ministry of Education for the development of appropriate programs. The 1984 circular *Ontario Schools: Intermediate and Senior Divisions* (OS:IS) sets forth the more specific goals, policies and requirements that govern the program in the Intermediate (Grades 7 and 8) and the Senior Divisions (Grades 9 to 13).

Overall, the stated purpose of the school system has been to "help each student develop his/her potential as an individual and as a contributing, responsible member of society who will think clearly, feel deeply, and act wisely." This purpose, OS:IS asserts, "can be achieved when the school facilitates the intellectual, physical, social, cultural, emotional, and moral growth of each student and develops more fully the knowledge, skills, and aptitudes that each student brings to the school."[2]

The goals of secondary education consist of helping each student to:

1. develop a responsiveness to the dynamic process of learning;
2. develop resourcefulness, adaptability, and creativity in learning and living;

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[2] Ontario Ministry of Education, *Ontario Schools: Intermediate and Senior Divisions*, (Toronto, 1984), p. 2.

3. acquire the basic knowledge and skills needed to comprehend and express ideas through words, numbers, and other symbols;
4. develop physical fitness and good health;
5. gain satisfaction from participating and from sharing the participation of others in various forms of artistic expression;
6. develop a feeling of self-worth;
7. develop an understanding of the role of the individual within the family and the role of the family within society;
8. acquire skills that contribute to self-reliance in solving practical problems in everyday life;
9. develop a sense of personal responsibility in society at the local, national, and international levels;
10. develop esteem for the customs, cultures, and beliefs of a wide variety of societal groups;
11. acquire skills and attitudes that will lead to satisfaction and productivity in the world of work;
12. develop respect for the environment and a commitment to the wise use of resources; and
13. develop values related to personal, ethical, or religious beliefs and to the common welfare of society.[3]

The 1984 OS:IS document also states that the role of secondary education is "primarily directed to preparing young adolescents both to develop the independence they need to act as concerned and compassionate citizens and to continue on to post-secondary studies wherever they have an interest and capability to do so." Two additional tasks are also noted: the preparation of young people to enter the world of work equipped with the attitudes and skills that will make them productive and successful and the need for schools to work along with parents to nurture students through the adolescent years.[4]

OS:IS further stipulates that "where circumstances permit and where it is considered desirable, secondary school courses from Grades 9 to 12 may be offered at one or more of the following levels of difficulty: the basic level, the general level, and the advanced level." Basic level courses, it states, "should serve the needs of the student who may not participate in post-secondary education and provide a good preparation for direct entry into employment." General level courses "should be considered as appropriate preparation for employment, careers, or further education in certain programs in the colleges of applied arts and technology and other non-degree granting post-secondary educational institutions." Advanced level courses "should focus on the development of academic skills and prepare students for entry to university or to certain programs of the colleges of applied arts and technology."[5]

The intended mandate of the secondary schools, as it has stood since 1984, can therefore be summarized as fundamental and general development and preparation; development of the intellectual, physical, social, cultural, emotional, and moral aspects of each individual and the preparation of each student for either the world of work or post-secondary education.

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[3] *OS:IS*, pp. 3-4.

[4] *OS:IS*, p. 2.

[5] *OS:IS*, p. 16.

Secondary schools also, above and beyond the mandate, presently serve adults wishing to acquire a secondary diploma and offer non-credit courses in general interest programs for youth and adults. In addition, it was noted that there has been pressure on schools to be in *locus parentis*, — to take over the role traditionally held by parents in teaching about, for example, moral values, life skills, and areas such as drug addiction, smoking education, AIDS, and environmental concerns.

College Education

The mandate for the colleges of applied arts and technology was first described in the introduction of Bill 153 to the legislature in 1965 by the Honourable William Davis, then Minister of Education. Bill 153 revised the Department of Education Act to include the establishment of colleges of applied arts and technology that would "offer programs of instruction in one or more fields of vocational, technological, general and recreational education and training in day or evening courses and for full-time or part-time students."[6]

Davis, in his introduction of the bill, stated that in keeping with the traditions and accomplishments in the province, a new level of education would provide "not only an equality of opportunity to all sectors of our population, but the fullest possible development of each individual to the limit of his ability."[7] He further stated that, "In this new age of technological change and invention, also, it is essential to the continued growth and expansion of the economy of our Province, and of our nation, that adequate facilities be made generally available for the education and training of craftsmen, technicians and technologists."[8]

Davis underscored the need for the colleges by quoting John Deutsch and John P. Robarts. Davis said:

> There has long been a deficiency in our educational system in regard to the training of technical personnel beyond the high school but short of the university level... An adequate general education is the best basis on which to build and to rebuild the particular work skills which the future will require... In addition to adequate general education, the increasing speed of technological change requires greatly expanded efforts in the fields of training, retraining, aids to labour mobility and of placement services...to achieve our goals...we must invest not only in buildings and machines; we must also invest in research, and in the education and training of our youth. (Dr. John Deutsch, Chairman of the Economic Council of Canada)
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> What has emerged from the evidence of the past four years is that the level of skills or education needed for many of the jobs that have opened up are such that some unemployed have been unable to shift readily from job to job within an industry or from one industry to another. It is almost a paradox that future growth in Ontario may be hampered because of skill shortage rather than displacement of workers by sophisticated machines... The long-term solution to most of our problems obviously lies in education and training, in the fullest possible development and utilization of all our human resources. We must prepare Canadian youth to enter the multitude of highly-skilled jobs available today and the ever greater number which will arise in the future. (Honourable John P. Robarts, Premier of Ontario)

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[6] Ontario Legislative Assembly, *The Department of Education Act*, Revised Statutes of Ontario, 1960, c.94, 14a (1).

[7] Ontario Department of Education, *Basic Documents Relating to Colleges of Applied Arts and Technology*, (Toronto, 1966), p. 5.

[8] *Basic Documents*, p. 5.

Davis contended that the policy of the government with respect to education and training is reflected in the following statement also by John Robarts:

> It is the task and the purpose of this government to provide whatever opportunities are necessary to enable each individual, through education, to develop his potentialities to the fullest degree and to employ his talents to the greatest advantage, and we plan to accomplish this through free choice, not by coercion and regimentation of our fellow-citizens.
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> In education, as in other segments of our economy, the key to our future clearly lies in research and development — in planning to anticipate and meet the demands of social and technical change through deliberate alteration of the educational structure. This will require research and experimentation, and a continuing evaluation of the old and the new.[9]

The intended mandate of the colleges, then, was to fill the perceived gap in the education system of Ontario, especially with regard to the needs of the changing economy. Davis asserted that the educational goal of the colleges was to be broadly based; that is, it was to provide "not only an equality of opportunity to all sectors of our population, but the fullest possible development of each individual to the limit of his ability." Davis saw human development in terms of vocational, technological, general and recreational education and training.

As for whom the colleges were meant to serve, Davis stated they are "planned to meet the relevant needs of all adults within a community, at all socio-economic levels, of all kinds of interests and aptitudes, and at all stages of educational achievement." He further stipulated that the colleges are "for adults as well as for youth, and for the upgrading and updating of workers either on the job or in evening courses, as well as for the unemployed."[10]

The structure Davis envisaged was to be modeled after the institutes of technology and vocational centres and not like the American junior colleges or those then being developed in Alberta which were to offer university-parallel courses. What Davis had in mind was "composite or comprehensive institutions ... providing a wide variety of programs of varying length, including work-experience programs ... and for probably more part-time than full-time students." Features common to all:

- they will be occupation-oriented, for the most part;
- they will be designed to meet the needs of the local community;
- they will be commuter colleges.[11]

Davis stressed that the emphasis "not only could but should vary from one community to another, as local needs dictate."

Davis further specified that there would be three major responsibilities for every such college:

1) to provide courses of types and levels beyond, or not suited to, the secondary school setting;

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[9] Cited in *Basic Documents*, p. 7.

[10] *Basic Documents*, pp. 8-9.

[11] *Basic Documents*, p. 12.

2) to meet the needs of graduates from any secondary school program, apart from those wishing to attend university; and

3) to meet the educational needs of adults and out-of-school youth, whether or not they are secondary school graduates.[12]

These three responsibilities form the basis of the original stated conditions of admission: 1) to admit any person who is the holder of an Ontario Secondary School graduation diploma (Grade 12); 2) to admit any person who is the holder of an Ontario Secondary School honour graduation diploma (Grade 13); or 3) to admit any person who has attained the age of nineteen years on or before the date of commencement of the program of instruction in which he plans to enrol ...[13]

In a subsequent addendum to *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology," dated February 1967, Davis announced four principles which, he suggested, were intended to enable the colleges to establish social identity. The four basic principles for the colleges were:

1) they must embrace total education, vocational and avocational, regardless of formal entrance qualifications, with provision for complete vertical and horizontal mobility;

2) they must develop curricula that meet the combined cultural aspirations and occupational needs of the student;

3) they must operate in the closest possible cooperation with business and industry, and with social and other public agencies, including education, to ensure that curricula are at all times abreast, if not in advance of the changing requirements of a technological society;

4) they must be dedicated to progress, through constant research, not only in curricula but in pedagogical technique and in administration.[14]

More than simply enabling the setting of social identity, the basic principles established an operational code for the colleges.

At several points in the *Basic Documents*, Davis mentioned a need for both social and technical research. Davis, and others he cited, maintained that research is needed to inform society about change both in terms of the production of knowledge and technological applications. In "Some Unique Features," Davis specifically states that the colleges "must be dedicated to progress, through constant research, not only in curricula but in pedagogical technique and in administration." The extent to which he intended the colleges to carry out the research, and who at the colleges was to do it, was not made explicit and remains a contentious issue.

Historical Notes

Apart from the stated mandate of the colleges, the historical setting in which the colleges were announced and established adds to our understanding of their present composition. Pressures came from two sources to place greater emphasis on training over general education than was originally stated by Davis. The first of these pressures came from two reports, *The Royal Commission on Education in Ontario* (1950) and *Post-Secondary Education in Ontario, 1962-70* (1963), both of which focused on the perceived need for vocational training[15] and the fact that the colleges applied for federal funding through the *Technical and Vocational Training Assistance Act* which was directed at increasing the supply of skilled workers. Second, both due to the input of the Applied Arts and Technology Branch of the Department of Education (which acted on a mandate for secondary education vocational training which began in the 1890s) and a preference for the Ryerson Model by the newly created Council of Regents, there was a clear bias towards technology with a vocational emphasis.[16] Another possible explanation for the inclination toward the vocational is that the universities played an influential role in the designing of the colleges. As Dennison and Gallagher wrote, "the need to preserve and protect the university system underlay most of their recommendations" and they were leery of allowing college students to transfer to the university and lower university standards.

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[12] *Basic Documents*, p. 13.

[13] *Basic Documents*, p. 38.

[14] Ontario Department of Education, *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology." (Toronto, 1967), p. 32.

"Some Unique Features" suggests that in spite of the vocational bias of the founders, reports and policies at the colleges' inception and the conflict that continues to exist around the mandate, Davis's intention was clearly for an institution which balanced social and vocational interests.

1.2 The Intended Relationship Between Secondary Schools and the Colleges

As to linkages, Davis explicitly mentioned in the *Basic Documents* only a relationship with the universities. He did state that the new colleges would be under the Department of Education and not under the new Department of University Affairs, since the colleges were to be modeled after the institutes of technology and vocational centres already under the Department of Education. No intended relationship with secondary schools, either co-operative or competitive, was originally mentioned.

In "Some Unique Features of Colleges of Applied Arts and Technology," Davis stated that he intended for there to be a co-operative relationship with secondary schools, especially around curricula. Further to this he recommended the establishment of a curriculum committee: a committee "comprising three members from or representing the university, three from the College, and three from the secondary school should be appointed for each College to investigate the ways in which programs of study at the different levels of education may be integrated. The chairman of the Committee should be from industry, business or some public agency."[17]

From the secondary school side, the 1984 *OS:IS* circular discusses intended linkages between schools and colleges. Linkage programs, *OS:IS* asserts, "provide for the alignment of subject content in certain secondary courses with programs offered by the Ministry of Colleges and Universities at the post-secondary level ... Linkage II is a pilot project, involving ties between secondary and college programs. Schools participating in the program are provided with a training profile listing specific performance objectives that must be accomplished as part of the course."[18] The suggested purposes of the linkage are to both avoid overlap between secondary courses and post-secondary courses and to facilitate advanced placement. Moreover, the linkage profiles are intended as a resource for the secondary teacher when planning the series of courses required to accomplish the Linkage program. It is also suggested that Linkage programs include a co-operative component, that is a related out-of-school work component. The actual mechanism for creating Linkage programs is not described.

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[15] John D. Dennison and Paul Gallagher, *Canada's Community Colleges: A Critical Analysis*, (Vancouver, 1986), pp. 31-33.

[16] Vicki Milligan and Tom Gallagher, "Mandate of Ontario's Colleges of Applied Arts and Technology," an unpublished paper, (Toronto, 1989), pp. 3-5.

[17] *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology," pp. 33-34.

[18] *OS:IS*, p. 28.

1.3 The Realization of the Mandates

The assumption being taken is that the mandates of the secondary schools and the colleges are realizable. While this may not be the case, this paper will not be considering it as a separate topic. The reader may want to reflect on this when considering mandate revisions.

The extent to which the mandates have been realized can be considered from at least two perspectives. First, we can ask whether there are two systems of education that structurally meet the conditions of the mandates. That is, are there two systems that are up and running and deliver curriculum as prescribed? A second consideration is whether the systems fulfil the stated and intended objectives set out in the mandates.

The Secondary School Mandate

The secondary school system does meet the first condition: schools follow the prescribed rules laid out in the Education Act and the regulations and curriculum, according to the *OS:IS* guidelines, is gradually being implemented. The second consideration, however, of whether the secondary system fulfils the stated and intended objectives of the mandate can be subjected to different tests. Each of these methods is problematic for different reasons. In the end, we might want to conclude that there is no final or adequate measure of success, that constant review and relative measures are ultimately required.

A number of reports in the past few years (Karp, 1988; Radwanski, 1987; Sullivan, 1988; King and Hughes, 1985) have indicated that not only the overall number of students graduating from secondary schools is less than 70%, but that many or most of the students taking general and basic level courses do not graduate. Taking this into consideration, one might conclude that the secondary school system is not realizing its mandate since there is a segment of Ontario's population that may not have fully developed their potential and are not adequately prepared to join the workforce.

A noted omission in the discussion of dropouts, however, is the "drop-in" factor and although relevant statistics on the number of people returning to school later in their lives do not exist, this number is substantial and has been increasing in the past few years. The mandate for secondary schools has been unofficially expanded to include meeting the needs of youth who have taken "an educational break" and to educate adults who have returned to school to complete a diploma. One might conclude from this that the secondary system is at least trying to meet the changing needs of the populace.

Another method for checking the success of secondary schools would be to test students for basic literacy skills. This has recently been done in the areas of math and science. Scores have then been compared with the scores of other students, sometimes in other countries. While Ontario is not at the top, our overall scores do compare well with other industrial nations.

Taken from yet another perspective, we can say that almost 70% of students do graduate from secondary school and go into the workforce, seek other training or enter a post-secondary institution. From this perspective, we may wish to say the system probably could benefit from improvement, but it is working reasonably well.

The existing secondary school mandate is presently undergoing review and may be facing system-wide reform. A provincial examination of elementary and secondary education has been the subject of the legislative Select Committee on Education, struck on February 11, 1988. The Committee sought responses on "key facets" of the organization of education through province-wide hearings and submissions from 202 groups and individuals. They also heard from invited experts. The Committee's first report, published in

December 1988, acknowledges the appropriateness of the Ministry of Education's Thirteen Goals of Education and its underlying theme of "helping each student."[19] In addition, the Committee recommended, in regard to the mandate of secondary education, that "The Ministry add a fourteenth goal that education develop an awareness of those stereotypes and assumptions that contribute to the unequal position of women in contemporary society." Moreover, they noted that there are identifiable groups in Ontario that are prevented from realizing their potential by various social, cultural and economic barriers. In response, they stated "that education must also be dedicated to eliminating the systemic obstacles that prevent equality of outcome for so many" and recommended that the mandate and funds be expanded to address issues of inequality and social concerns. To this end, they also recognized the need for the Ministry, boards and schools to work with other ministries, relevant agencies, service providers, other concerned groups in the community, and parents and guardians. A further recommendation regarding the mandate centres around the recognition that education be a lifelong process and therefore calls for an expansion of the definition of formal education based on the needs for continued learning.

Committee concerns specific to *OS:IS* include the need to implement *OS:IS* more consistently across the province, a review of *OS:IS* implementation, provision of more assistance to students in the transition from elementary to secondary school, making *OS:IS* more flexible, and analyzing "the impact of credit requirements, the balance of compulsory and optional subjects, expectations of the time to complete requirements, and other structural features of *OS:IS* that affect students."[20]

Recommendations for changes in the structure of secondary education were announced in the Speech from the Throne in April of this year. Recommendations include moving Grade 9 to the Intermediate Division, the Senior Division will then be Grades 10 to 13 only; courses in Grade 9 would no longer be credited toward the Ontario Secondary Diploma (OSSD). Future changes include the reduction of technology courses from over 60 courses to five course clusters: construction, manufacturing, communications, transportation and services. Other recommended changes include updating existing facilities and encouraging community exchange through closer links in order to match school needs with donations or loans of equipment from local industries. It is proposed that a greater emphasis be placed on making program delivery more flexible through more extensive use of SWAP, co-op education, linkage, articulation, and re-entry strategies which include half and quarter courses for part credits, semestering and trimestering, and adaptable timetabling. The focus of proposed Ministry innovations is to make secondary education more generic — less specific skill oriented and more basic skills oriented — in order to better prepare students to meet the demands of high tech jobs and for employment mobility. The *OS:IS* document has recently been up-dated but no policy changes have been included. The basic organizational structure of the secondary schools and curriculum content under *OS:IS* will continue to undergo review.

The College Mandate

Some of the ways we might consider the realization of the college mandate are the same as those above with respect to the secondary mandate; others must be unique to the colleges. We could say that the community colleges in Ontario, now numbering 23, are providing programs in accordance with the regulations stipulated in legislation and basically meet the structural conditions suggested in the *Basic Documents*. They thereby satisfy the first condition.

However, as in the case of secondary schools, we would also have to admit that the community colleges face large numbers of dropouts. Given that Stoll and Scarff in 1983 and Dietsche in 1988 found that college attrition is between 40 and 50 per cent, we might conclude that the colleges aren't providing for "the fullest possible development of each individual to the limit of his ability." We will look at this more closely in Section 3 - Access, Competence and Success.

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[19] Select Committee on Education, *Report 1988*, Queen's Park, (Toronto, Ontario, December, 1988), p. 2.

[20] Select Committee on Education, *Report 1988*, pp. 3-8.

On the other hand, subjected to other tests of success, most community college students are placed in jobs after graduation, a growing number of students go to colleges for part-time studies and return to college for up-grading and retraining, and some go on to university. There has been increasing pressure on the colleges to provide both ESL and basic literacy programs. On these grounds we may wish to say that colleges are fulfilling their mandate. Again, we will examine these issues more closely in subsequent sections.

With reference to meeting the needs of students, a noted deficiency of the colleges has been in meeting the needs of the older student. It has been suggested that older students require more part-time, more evening, more flexible and more upgrading and retraining programs. Principally two factors have been responsible for restricting provision of programs suited to older adults: the full-time orientation of the colleges and the current funding formulas. Although the mandate stipulates that the colleges are to provide evening and part-time programs, the colleges' focus has almost exclusively been on day-time programs for full-time students. Current funding formulas of the Ministry of Colleges and Universities, Ministry of Skills Development and the federal government are based on "full-time equivalency." The funding rate for part-time students is approximately only two-thirds that for full-time students. As a result, many colleges have not been able to respond to the needs of part-time or evening students. People who teach evening courses are, by and large, not regular college faculty. They are paid an hourly rate which is less than a full-time faculty rate. Quality has been difficult to control and is sometimes below day-time levels. While there are more part-time than full-time students, the funding policy and its ramifications gives credence to the belief that they are not viewed as important as full-time students. As referred to by the Select Committee on Education as well as interviewees, continuing education — lifelong learning — is a principle the Ministry of Education and the Ministry of Colleges and Universities profess to advocate and yet neither has gone so far as to fully implement or support. Since forecasts predict that the number of adult, part-time students will increase in the coming decade and the mandate specifically states that the colleges are "planned to meet the relevant needs of all adults within a community," it would appear that something must be done in order to fulfil this obligation and honour the principle of lifelong learning.

In 1967 Davis added four basic principles to the original mandate. Davis indicated in "Some Unique Features" that the colleges are to embrace total education, vocational and avocational and provide for complete vertical and horizontal mobility; they must develop curricula that meet the combined cultural aspirations and occupational needs of the student; they must operate in the closest possible cooperation with business and industry, and with social and other public agencies, including education; and they must be dedicated to progress through constant research. In terms of realization, it would appear that the colleges have fallen somewhat short with respect to these four principles and each has been identified as an area requiring review.

In Vision 2000 papers by Michael Skolnik, Peter Stokes and John Dennison, the issue of transferability, both vertical and horizontal, is considered.

General education has been identified as a particular problem in the colleges. Colleges have, since their inception, placed less emphasis on general education than vocational training and as reported in the brief "Reviewing the Commitment: How to Save General Education in Ontario Community Colleges" the position of general education has further declined in the past decade.[21] Presently it is left to each college to decide the proportion of general education to vocational courses. In most colleges it is less than 30% of a program and varies greatly with respect to definition. The question of what general education actually is in the college context has been raised. Presently, it appears that opinions are divided among the views that general education should be 1) a theoretical component of the curriculum that does not directly address the vocational skill objectives of the program (e.g. problem solving, critical thinking); 2) a theoretical component that supports or is directly related to the vocational objectives of the program; or 3) elective courses in social sciences and humanities which have no direct connection to the vocational objectives of the program but offer a broader understanding and experience of the social and cultural aspects of life. The third option seems to be closest to the intent of the original mandate. Given the realignment of the secondary school mandate regarding an emphasis on generic skills, a resolution of the conflict around the issue of general education in the colleges may be timely. Moreover, it must also be considered in relation to the needs of a more advanced technological society and the philosophic orientation that the colleges adopt for the coming decade and century.

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[21] General Education Faculties, "Renewing the Commitment: How to Save General Education in Ontario Community Colleges," a brief submitted to Vision 2000 from eight Ontario colleges, (Toronto, May 1989).

The relationship between the colleges and industry has, for the most part, not centred on technological research and development. Rather, industry has been quick to see the colleges as its training lifeline. Many of the interviewees mentioned the lack of involvement of industry in education and training. For the most part, industry has left education and training up to the schools and colleges but has had much to say in terms of criticizing what is done and expressing their demands for specific trade skills. Some have argued that the role of the advisory committees needs to be better defined and more fully developed in the whole area of business and industry liaison with the colleges. Others have argued that business and industry should do more on-site training themselves or, alternatively, they should contract with the colleges when highly specialized training is needed.

With regard to social and technical research and technological development, the colleges have not accepted this as part of their mandate. Little formal research is sponsored by the colleges or done by college faculty, although some has occurred in specific areas such as pulp and paper. The question that is raised here is: what part should the colleges play with respect to technological research and development? A general need for research in a technological society and a particular need for the colleges to know more about themselves were identified during the interviews. Davis voiced the need for the colleges to "be dedicated to progress, through constant research, not only in curricula but in pedagogical technique and in administration." Few, if any, systematic studies have been done by Ontario colleges in the areas of college curricula, pedagogical technique or administration. Most of the research on colleges is done at the universities, especially by doctoral students. Adult education, for example, is a rapidly growing area of interest and, considering demographic projections, the need to know more about how best to teach adults will continue to be of primary importance to college faculty and administrators.

Walter Pitman, in *The Report of the Advisor to the Minister of Colleges and Universities on the Governance of the Colleges of Applied Arts and Technology*, noted in particular the need for generic and basic skills in an educational milieu that trains people for more sophisticated work. He added that applied research is related to the very essence of service that the college could be providing to the industrial system through shared involvement with industry and the universities. He also argued that there should be an enlarged mandate, suggestive of an "open-door policy," to provide "increased educational and skill training opportunities for women, single parents, minorities, residents of remote communities, the physically handicapped ... and the functionally illiterate."[22] Pitman concluded that strong academic leadership is needed at all levels.

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[22] Walter Pitman, *The Report of the Advisor to the Minister of Colleges and Universities on the Governance of the Colleges of Applied Arts and Technology*, (Toronto, June 1986), p. 10.

1.4 The Current Relationship Between Schools and Colleges

According to interviewees representing both the schools and the colleges, the current relationship between secondary schools ranges from "not much of an interaction to a fairly significant interaction at maybe the senior academic level of the institution or with the specific departments within the college working with individual teachers or co-ordinators or people at the board level." Although steps are now being taken to establish closer working relationships, the relationship described by Davis has not come to be. The college curriculum committees, as outlined by Davis, were never established. Ad hoc and informal curriculum committees do meet at some of the colleges. The Linkage II program outlined in *OS:IS* was similarly never put into operation. Relationships until this past year have been strictly of a "voluntary" nature. With articulation and SWAP, "formal agreements" are now beginning to happen.

For several years, the Ontario Secondary School Principals' Council has had on their agenda a major concern about the lack of a means to deal with issues of common concern. These include college/school liaison, curriculum development and integration, admission policy, programs for graduates of general and basic level programs, programs for special needs students, college involvement in professional development in the secondary sector and the sharing of resources and facilities.

When *OS:IS* was being developed at the Ministry level in 1982, the Committee of Presidents (college) hired one person to work part-time through the Association of Colleges of Applied Arts and Technology (ACAATO) to make sure that the colleges had some role in the development of the new *OS:IS* curriculum. The position became full-time for the following year and then, for awhile, there was no co-ordinated activity. During the "development" year, approximately 140 to 150 college individuals participated in various advisory committees in the development of the secondary course outlines. Since 1987, ACAATO has been instrumental in bringing together the Colleges' Committee on Academic Affairs and the Ontario Secondary Schools Principals' Council to discuss areas of mutual concern. Joint meetings have been held and the executives of the two organizations continue to work together to discuss and plan co-operative activities.

A quickly growing interest in articulation is spreading in south-central Ontario. In January of 1988 Vanier Secondary School and Seneca College formally embarked on a venture to address the needs of both institutions, initially in the area of student preparation for college. More recently Centennial, Humber and Durham Colleges have also explored articulation. Secondary schools in North York, York Region, Etobicoke, Scarborough and Durham have expressed interest in articulation.

Other initiatives — exemplary practices — do exist and "have proven to be of mutual benefit for the institutions and the students who have been involved or affected by such liaisons." However, it has been pointed out that information on successful links has not been publicized "in a form that would raise awareness and encourage similar and additional initiatives across Ontario,"[23] at least not for the secondary sector. ACAATO continues to serve as a catalyst for liaison and as a distribution centre for information on curriculum and exemplary practices to college executives. Other than the OSSPC, there has been no similar analogous agency acting on behalf of the secondary schools.

Section 4 of this paper deals exclusively with the topic of relationships. For details and extensive discussion of current college/secondary school relationships, please refer to it.

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[23] Task Force Report to Colleges Committee on Academic Affairs and Ontario Secondary Schools Principals' Council, "The Development of Effective Liaison Between the Colleges of Applied Arts and Technology and the Public Secondary Schools of Ontario," (November, 1988), p. 1.

1.5 Redefinition of the Relationship

An initial response made by several of the interviewees was, "Yes, the present education system and the relationships among the various sectors is working well." However, when probed about issues such as high dropout rates in both secondary schools and colleges, people became more willing to admit that the situation might not be entirely adequate and that it, indeed, does require revision.

Exemplary practices, as noted above, are working well, are providing better educational experiences, and are serving to inform students and other community members about education and educational opportunities. It must be noted, however, that the situation is a dynamic one; as the word spreads, new initiatives are devised and tried. Also, as noted, the word is not always spread or spread systematically throughout the province. There are inadequacies in the current relationships, most conspicuously in the areas of curriculum integration and information exchange. A more formal means of communication linking secondary schools and colleges may be beneficial. These issues will be further discussed in the context of "student success" in section 3.

There is widespread agreement that the secondary schools and colleges must be more closely linked. What this means is not entirely clear. Overall, the point was made that "there is a need for a more collaborative relationship, at a local level hopefully, between colleges and high schools and between colleges and universities and presumably between colleges and the workplace..."[24] None of the interviewees who responded to the question about a possible need for continued competition answered affirmatively; that is, all answered that education cannot be seen as having competitive elements. The consensus is quite clearly that educators must be partners — collaborators — working together in the provision of quality education.

Considering both the consensus found among educators and the third principle in "Some Unique Features," it appears unlikely that the mandated relationship needs redefinition. Perhaps the point is that it may need more explicit definition, undoubtedly it needs to be communicated and it needs to be further operationalized.

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[24] Vision 2000 interview.

Section 2: The Students: Past, Present and Future

Introduction

William Davis, in the introduction of the bill to establish the colleges, stated that the new level of education would provide "not only an equality of opportunity to all sectors of our population, but the fullest possible development of each individual to the limit of his ability."[25] The colleges, he said, are "planned to meet the relevant needs of all adults within a community, at all socio-economic levels, of all kinds of interests and aptitudes, and at all stages of educational achievement." To this end, he further stipulated that the conditions of admission would be: 1) to admit any person who is the holder of an Ontario Secondary School graduation diploma (Grade 12); 2) to admit any person who is the holder of an Ontario Secondary School honour graduation diploma (Grade 13); or 3) to admit any person who has attained the age of nineteen years on or before the date of commencement of the program of instruction in which he plans to enrol...[26]

Contrary to the mandate, a widely held belief in the province is that the colleges are meant for the "general level students" but that the colleges actually prefer "advanced level students." It has been suggested that most college faculty would rather teach advanced level students, and some argue that the general level students are not properly prepared for college. For some college programs only students who have taken advanced level courses are admitted. Overall, there seems to be some confusion about who can, who should and who actually does go to college.

In a 1987 paper, "General Level Students Going to College: A Reexamination of the Issues," Graham Collins addressed the access and target issues. In the paper, Collins noted that a majority of secondary school staff, administrators, board and Ministry officials perceive the role of the colleges to be the provision of programs for students studying at the general level and, moreover, that "there is a feeling among all levels of the secondary school sector that the CAATs are not adequately meeting the learning needs of students studying general level courses." He further noted that many school boards had "implemented in-service training programs to update secondary teachers regarding teaching and evaluation strategies for general level students" and he raised the question of whether college staff were aware of these changes and whether they were adequately informed about teaching strategies and evaluation techniques for students who had studied at the general level.[27]

Questions about who actually goes to college, whose needs may not be met, who are likely to need college services in the future, and the concomitant issues of access, preparedness, and success are the topics of this section and section 3.

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[25] *Basic Documents*, p. 5.

[26] *Basic Documents*, p. 38.

[27] Graham Collins, "General Level Students Going to College: A Reexamination of the Issues," (Toronto, December 1987), pp. 1-2.

2.1 Who Attends College

Full-time Post-Secondary Enrolment

In fall 1988, 95,043 students were enroled in full-time post-secondary programs in the colleges.[28] Between 1978 and 1988, full-time post-secondary enrolment increased almost 50%. Most of that growth took place between 1978 and 1984. Since 1984, enrolment has been relatively stable and has remained below the peak reached that year. This pattern is illustrated in Figure 2.1 (see page 69 in the Appendix). These numbers represent slightly less than 90 per cent of total full-time enrolment in the college system; the remaining 10 per cent is enroled in adult training and apprenticeship programs.

A review of full-time post-secondary enrolment by **region** for the period between 1979 and 1988 indicates that enrolment has not been even throughout the system. The greatest relative growth for the decade has been in the northern region while the least has been in the western region. Between 1979 and 1984, the central region experienced a 52% increase. Net growth for the decade in each of the four regions is: 44% in the central region, 33% eastern, 51% northern, and 18% western. For the past five years, full-time post-secondary enrolment has remained relatively constant in the central, northern and eastern regions while the western region has experienced a decline. These enrolment patterns are shown in Figure 2.2 (see page 70 in the Appendix).

The distribution of full-time enrolment in the four **college divisions** - technology, business, applied arts and health - for the same ten year period is shown in Figure 2.3 (see page 71 in the Appendix). Business programs continue to be the most in demand and have experienced a slight increase. Health and applied arts have also experienced enrolment growth. Enrolment in applied arts programs has increased 16% since 1986. Between 1983 and 1988 enrolment in technology programs has declined by 30%.

Divisional differences vary by region and college as well. The Vision 2000 environmental scan charts the 1988 distribution of enrolment by division relative to the overall distribution for the system by each college in the four regions (see pages 59 and 60). These patterns indicate that specialization has taken place in the colleges. The impact of specialization on program quality, accessibility and efficiency has been considered by Vision 2000 Study Team 4.

The distribution of full-time enrolment by **latest activity** indicates that most students enter college directly from other full-time studies. In 1987, almost 65% of students entered college from other full-time studies; this has declined slightly from 68% in 1976. An average of 26% of students enters college from the labour force and an average of slightly over 6% enters from other activities. Entrance from other activities has risen slightly in the past five years.

The distribution of full-time enrolment according to a student's **previous educational level** is shown in Figure 2.4 (see page 72 in the Appendix). The greatest number, an average of 50%, of students enter college with a grade 12 secondary school diploma. Relative to other educational backgrounds, the percentage of grade 12 graduates has been increasing, from 47.3% in 1978 to 52% in 1987 while the percentage of grade 13 graduates has declined from 21% in 1979 to 14.6% in 1987. Another 11% of students have completed grade 12 and have done some grade 13 work. In 1987, 4% of students entered college with less than a secondary diploma, almost 7% had some university or a degree and 6% had some other post-secondary training. A small percentage entered college through an apprenticeship or non-post-secondary program, held a professional certificate, passed a CAAT qualifying exam or had some other qualifications.

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[28] Data presented in section 2 of this paper were supplied by the College Affairs Branch of the Ministry of Colleges and Universities or the Ministry of Education. Graphs and tables, if not otherwise identified, were prepared by the researcher.

Figure 2.5 (see page 73 in the Appendix), shows full-time post-secondary enrolment by age. In the past 10 years, the 17- to 24-year-old group has accounted for the greatest number of college students, 82% of the total. Since 1983, the 20- to 24-year-old group has been increasing, while the enrolment of 17- to 19-year-olds has declined. Nineteen-year-olds have the highest participation rate in post-secondary education. Enrolment of 25- to 34-year-olds and over 35-year-olds has increased marginally during the same period.

More women than men have enroled in full-time college studies during the past decade. The number of women attending college has continued to grow and the number of men has declined since 1984. Figure 2.6 (see page 74 in the Appendix), shows full-time post-secondary enrolment by gender.

Examination of participation rates by both gender and age indicates that all age groups had increased participation rates since 1976 except 17-year-old females. Females in the 20-24 year age group almost doubled, from 2.6% to 5.0%. Males in the 20-24 year age group increased by 50%, from 3.5% to 5.3%. Nineteen-year-olds account for the highest participation rates; approximately 15.4% of all 19 year-old women and 11.6% of all 19 year-old men were enroled in a post-secondary college program in 1988.

Analysis of divisional participation rates by women indicate that, although more women than men attend college, the proportion of women to men is not equal in all divisions. Between 1978 and 1987, an average of 88.5% of women were in health sciences while only 11.3% were in technology programs. There has been a 16% increase in the percentage of women in technology between 1978 and 1987 and almost a 2% decline in health sciences during the same period. Participation rates have fluctuated slightly in business and applied arts over the decade. The 1987 figures indicate that approximately the same percentage of women participated in business in 1987 as in 1978 and there has been an almost 5% decline in applied arts. Table 2.1 illustrates the enrolment rates of women in the four college divisions.

Table 2.1
Full-time post-secondary enrolment
Percentage of women by division, 1978-1987

	Tech.	Business	A. Arts	Health
1978	10.6	58.9	65.7	88.5
1979	11.2	59.2	66.8	88.7
1980	11.3	60.1	66.6	88.4
1981	11.2	61.1	66.2	89.0
1982	11.2	61.4	63.9	90.0
1983	10.7	60.7	62.6	89.8
1984	10.9	59.8	61.3	88.9
1985	11.6	59.1	61.0	87.8
1986	12.2	58.5	61.5	87.1
1987	12.3	58.4	62.5	86.8

Examination of the data on native tongue[29] of full-time post-secondary students from 1978 to 1987 indicates that on average 85% speak English as their first language. French has declined by almost 40%, from 5.2% to 3.8%. People with "other" native tongues have increased from 6.8% to 10.4% of the student population, a net increase of over 50%. The increase in the number of students with "other" native tongues has occurred exclusively in colleges in the central region where there has been a net increase of 386%. There has been almost a 30% decrease in the number of students speaking other native tongues in western colleges, a 5% decrease in northern colleges and the east has shown no change in the past ten years. Regional patterns of native language for 1987 are shown in Table 2.2

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[29] Data in this set is reported as missing or incomplete. The error is estimated to be less than 4%. The data may, however, have other error due to the reporting of people who are bilingual who may have recorded English rather than French or "Other" as their native tongue.

Table 2.2
Native tongue of full-time post-secondary students, 1987

	English	French	Other
Central	79.0%	1.0%	19.9%
Eastern	90.6%	7.0%	2.3%
Northern	80.3%	16.2%	3.5%
Western	95.0%	0.6%	4.4%

In 1988, the preferred language of instruction was English for 96% of full-time post-secondary students. Three per cent indicated they prefer French and the remaining 1% preferred bilingual instruction.

Full-time Co-op Enrolment

The number of students enroled in programs with a co-op option is not available. However, for comparative purposes, the number of co-op students on work terms between 1984 and 1988 are shown in Table 2.3. On the whole, there has been an increase in co-op activity from one year to the next. The summer work term has almost as many students as the fall and winter terms combined. The 1987 total is almost 18% higher than the total in 1984. The fall and winter terms of 1988 show a 22% increase over the same two terms in 1987.

Table 2.3
Full-time post-secondary co-op students on work term

	Fall	Winter	Summer	Total
1984	1757	1408	2969	6134
1985	1949	1626	3227	6802
1986	1881	1659	3297	6837
1987	1854	1644	3719	7217
1988	2061	2211	N/A	N/A

Full-time Training Enrolment

Full-time post-secondary enrolment increased from 83% in 1983 to 86% in 1987. Over the five year period, full-time adult training programs (direct purchase) declined by 54% and tuition short programs declined by 23%. Apprenticeships increased by 37%. Overall, enrolment in full-time training programs declined by 21.5% in five years. Figure 2.7 (see page 75 in the Appendix), illustrates the full-time training enrolment patterns.[30]

Figure 2.7 is based on a head count in November of each year. Data on enrolment is also recorded by the cumulative number of entrants in a fiscal year. Many adult training programs which are less than 52 weeks duration have continuous intakes. The number of people served by the CAATs in adult training programs is shown in Figure 2.8[31] (see page 76 in the Appendix). While a different picture of activity is reflected in Figure 2.8, a five year decline remains evident. There has been a 37% decline in adult training (direct purchase) and a 22% decline in tuition short entrants. The number of apprentices fell by almost 4%.

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[30] Indirect purchase was introduced in late 1986. Data collection started in 1987, but may not capture all activity under this program. Enrolment in indirect purchase adult training was 1,705 (1987) and 2,307 (1988).

Part-time Enrolment

Part-time activity, as a function of the number of entrants, has increased by 44% during the past ten years to an all-time high of 563,019 students in 1987. This accounts for students in both post-secondary and non-post-secondary programs. In the five years between 1983 and 1987, part-time entrants in post-secondary programs have declined by 1.9% while participation in non-post-secondary programs has increased 39%. In 1987, almost three-quarters of the individuals participating in part-time study were in non-post-secondary courses. The overall pattern of part-time activity is shown in Figure 2.9 (see page 77 in the Appendix).

A comparison of part-time post-secondary and non-post-secondary enrolment by region from 1985 to 1987 (Table 2.4) indicates that there has been a substantial increase in post-secondary activity in the northern region (53%) and a decrease in post-secondary activity in the western region (37%). Non-post-secondary enrolment is significantly greater than post-secondary enrolment in all regions.

Table 2.4
Part-time Post-secondary/non-post-secondary course registrations

	1985		1986		1987	
	Post-Sec	Non-P-S	Post-Sec	Non-P-S	Post-Sec	Non-P-S
Central	31%	69%	28%	72%	29%	71%
Eastern	40%	60%	37%	63%	40%	60%
Northern	17%	83%	27%	73%	26%	74%
Western	26%	74%	20%	80%	19%	81%
Total	29%	71%	27%	73%	28%	72%

Source: Vision 2000 Study Team 1 - Project 4

Data are also collected on part-time activity in funded and non-funded courses. Funded courses are predominantly career-oriented. The funded portion of part-time activity measured in student contact hours (SCH) has grown 63.7% between 1979 and 1986, compared with an increase of 28.3% for non-funded courses.[32] A regional breakdown of funded part-time activity indicates that the greatest portion of activity in this category is in the central region, 43% in 1987/88; activity in other regions was 21.8% in the east, 7.6% in the north and 27.7% in the west.[33] Analysis of the regional distribution of percentage change in funded SCH activity indicates system-wide instability between 1981 and 1987. This is illustrated in Figure 2.10 (see page 78 in the Appendix).

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[31] Indirect purchase entrants for the year 1987-88 stood at 8,674 students.

[32] The non-funded value excludes activity from Loyalist and Niagara Colleges for which consistent data are not available. Teresa Karolewski, "Continuing Education in Ontario's Community Colleges: Student Profiles, Barriers and Exceptional Practices," Vision 2000 Study Team 1 - Project 4, (Toronto, 1989), p. 2.

[33] Teresa Karolewski, "Continuing Education in Ontario's Community Colleges: Student Profiles, Barriers and Exceptional Practices," Vision 2000 Study Team 1 - Project 4, (Toronto, 1989), Table 2.

2.2 Future College Participation

Full-time post-secondary college enrolments are projected to remain stable through 1991 and then fall by 5% between 1991 and 1997. They are expected to make a gradual recovery between 1998 and 2005 when they should once again reach their 1988 level. This pattern is shown in Figure 2.11 (see page 79 in the Appendix).

Part-time college enrolments are expected to rise modestly until 1993, depress slightly until 2001 after which they are expected to rise again. This pattern is illustrated in Figure 2.12 (see page 80 in the Appendix).

Determining what will happen to participation rates is extremely difficult because of the many variables and assumptions that are required. In developing the "benchmark" projections cited above, the College Affairs Branch of MCU has used a model based on user-specified assumptions regarding age-specific participation rates. These are then applied to age-specific projections of the population (developed by the Ministry of Treasury and Economics). The enrolment projections assume that the participation rates will remain constant at the 1988 levels.[34] The following factors, however, are likely to further influence participation rates:

- future economic conditions (participation rates may be expected to increase if economic conditions deteriorate);
- future operating grants provided to the college and university systems (grants impact the ability of each system to accommodate enrolment growth);
- future labour market changes (economic policy may impact on the type of post-secondary education required to meet the needs of Ontario's business and industry);
- the impact of *OS:IS* curriculum in the secondary school system;
- future initiatives in education (participation rates may be expected to increase if educational policies affecting secondary and college retention, secondary/college linkages and access strategies are implemented);
- future social changes (demographic changes will likely affect all social institutions).

Benchmark projections, based on 1988 participation rates, may be assumed to be modest. Although some factors known to affect participation rates, such as economic conditions, cannot be estimated with accuracy, analysis of other factors such as initiatives in education and social change suggest that future participation rates will be greater than in 1988.

The college benchmark projections are based on age-specific population projections. Population projections are based on assumptions about fertility, mortality and migration. Population in the 0 to 18 year age group is predicted to remain stable through the first decade of the next century. The segment between 14 and 18 is predicted to decline through 1992, and then increase by 12% by the year 2011. The number of 18 to 24-year-olds, the age of most college students, is expected to decline by 12% between 1986 and 1998 and then increase by 6.9% between 1998 and 2006.

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[34] For an extensive discussion of the determinants of enrolment rates based on the consumption, the investment and cohort size theories, see Foot and Pervin, "The Determinants of Postsecondary Enrolment Rates in Ontario," *The Canadian Journal of Higher Education*, Vol. XIII-3, 1983; and Foot and MacNiven, "The Determinants of Enrolment Rates and Enrolments in Ontario Community Colleges," Vision 2000 Study Team 1 - Project, Toronto, 1989.

Secondary school enrolment declined by 6% between 1978 and 1984 and has increased slightly each year since 1984. The most recent secondary school projections (see Figure 2.13 on page 81 in the Appendix), for the years 1988 to 1997, indicate a decline for 1988 and a continuance of that level through 1992 after which enrolments are expected to increase to the end of the period. The actual 1988 enrolment exceeded the projection by 2% and, rather than declining, the enrolment increased by 9494 students. The unexpected increase is attributed to improved retention, increased re-entry and increased immigration from other provinces and countries.

Table 2.5 (see page 82 in the Appendix) shows the progress of students who began grade 9 in the four years between 1979 and 1982. Group enrolment, as a percentage of the corresponding grade 9 enrolment, increased from 82% in 1982 to 89% in 1986. The portion of students who obtained a secondary school diploma at the end of grade 12 has increased steadily from 62% in 1983 to 69% in 1987. The proportion of the grade 9 enrolment that entered a CAAT in the fall following grade 12 graduation has remained constant at 13% and a further three per cent enroled in CAATs at the end of grade 13. For each of the four groups who started grade 9 between 1979 and 1982, 18%, 20%, 21% and 23% entered an Ontario university after grade 13 graduation. Analysis of enrolment by grades for the decade indicates that there has been a net loss in grades 9,10 and 11 and a net gain in grades 12 and 13. Enrolment in grade 11 has increased 5% since its 1984 low. Secondary enrolment in grades 11, 12 and 13 is illustrated in Figure 2.14 (see page 83 in the Appendix).

From the surveyed data we note that secondary enrolment patterns may differ from the population projections and secondary participation rates may continue to be higher than in previous periods. Considering that secondary enrolment is higher this year than expected, it is possible that the number of students entering college will be higher than projected. While the proportion of grade 9 students going on to college has in the past few years remained constant, if secondary school enrolments continue to rise, especially in the senior grades, the number of potential college students will increase. If articulation and other linkages between secondary schools and colleges serve to better inform and prepare students for college, then the proportion as well as the actual number of students who go to college may increase.

Data on the "retirements" from secondary schools without diplomas or certificates indicate there has been a slight increase from 12.6% in 1982-83 to 13.3% in 1986-87. On the other hand, the number and proportion of re-entrants to the system has also increased. The following figures represent total re-entrants as a percentage of total retirements: 1982-83, 44.9%; 1983-84, 42.8%; 1984-85, 45.0%; 1985-86, 47.5%; and 1986-87, 54.1%. In 1986-87, there was a total of 39,902 re-entrants.[35]

Administrators of secondary education have taken note of the extremely high dropout rates especially among students taking the general and basic level courses, and have responded by taking several courses of action. Many school boards have implemented in-service training programs to update secondary teachers regarding teaching and evaluation strategies for general level students. Other retention strategies include negotiating articulation agreements and developing other linkages with colleges, expanding school-workplace experiences such as co-op and SWAP, strengthening guidance relationships and reviewing the content of all courses. Further increases in retention rates are likely to follow.

The Ministry of Colleges and Universities has since 1984 conducted a survey of secondary students to determine the probable size of the university and college bound high school graduating classes. From *A Study of the impact of OS:IS implementation on the Post-Secondary System in Ontario*, we can gather relevant information on the grade 10, 11 and 12 students' "intended destinations" and the "reality" of their intentions as measured against their accumulation of credits and the mix of their basic, general and advanced courses. The most recent (Phase IV) report, based on a sample of one in twenty-five students, relates the following student intentions:[36]

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[35] Ontario Ministry of Education, *Education Statistics Ontario, 1987*, Tables 2.92 and 2.95.

Table 2.6
Intended destinations

	1987-88 Grade 10		1987-88 Grade 11		1987-88 Grade 12	
	#	%	#	%	#	%
University	2351	56.6	1889	48.6	1306	44.0
CAAT	1422	34.2	1357	34.9	1039	35.0
Work	304	7.3	523	13.5	565	19.0
Other	80	1.9	115	3.0	61	2.1

This table indicates that in all grades the largest proportion of respondents indicate their intention to proceed to university. A relatively consistent number of students in all grades intends to go to a CAAT. A moderate proportion of grade 11 and 12 students intend to enter the workforce immediately following secondary school. The Phase IV report states that these patterns are similar to those in the Phase III report a year earlier, except that the proportion of students intending to go to college has increased slightly from a range of 31% to 33.5% to the present 34-35%. Note that these figures are considerably higher than the number of students that actually go to college.

After analyzing the accumulation of credits and the mix of basic, general and advanced courses of these students, it was determined that not all of the students' intentions were considered realistic. Table 2.7 (on the following page) shows that as students move into grade 12 their intentions become more realistic than they were in either grade 10 or 11. There is a group of students who planned to attend university (CAAT - 1) whose intentions are considered unrealistic for university but would be considered realistic for a CAAT. Twenty-nine per cent of the grade 10 respondents, 23% of the grade 11 respondents and 20% of the grade 12 respondents who intended to go to university, fell into this category.[37] CAAT and university registration compared with secondary school enrolment for specific grades in preceding years indicates that "about 16% of the total enrolment in grade 10 eventually enters the community college system, and about 23% register in university. Similarly, about 17% of the total enrolment in grade 11 entered the CAATS and 25% enter university. Approximately 18% of the total enrolment in grade 12 enter the CAATS (after grade 12 or 13), and about 26% go to university."[38]

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[36] Ontario Ministry of Colleges and Universities, *A Study of the impact of OS:IS implementation on the Post-Secondary System in Ontario*, (Toronto, 1988), Table 4.2.1., p. 15.

[37] *A Study of the impact of OS:IS*, p. 17.

[38] *A Study of the impact of OS:IS*, p. 15.

Table 2.7
Realistic Destinations

	1987-88 Grade 10		1987-88 Grade 11		1987-88 Grade 12	
	#	%	#	%	#	%
University	1413	36.04	1319	34.96	940	31.92
CAAT - 1	686	17.5	438	11.61	262	8.86
CAAT - 2	1034	26.37	1024	27.14	809	27.47
Diploma	327	8.34	344	9.12	272	9.24
No diploma	461	11.76	648	17.17	663	22.51

The number of students who can be considered realistic candidates for college is much greater than present college enrolments. For grade 12 students, a total of 36% of the sample students can be considered potential college students, while only half that number actually enrol in a CAAT. Since follow-up data is not collected by MCU, it is not known which students actually apply and go on to college. College enrolment can conceivably be increased and more rationally managed if specific groups are targeted.

Another set of factors that must be considered in terms of their effect on college projections are detailed demographic projections which suggest that all social institutions will be affected in the future. Ontario's rate of population growth is projected to fall from the average decade rate of 19% between 1921 and 1991, to 11.1% from 1991 to 2001 and 7.9% between 2001 and 2011. The median age of Ontario's population in 2006 will be 39.7 years compared to 32.3 years in 1986. The growth in Ontario's population by selected age groups is shown in Figure 2.15 (see page 84 in the Appendix). Colleges will likely be affected directly in terms of who their clients will be, in terms of the programs they will be asked to provide and also in terms of the numbers of graduates needed for the workforce.

Presently almost 85% of post-secondary students in Ontario's colleges are 24 or younger. The population aged 17 to 24 is projected to decrease by almost 10% between 1987 and 2000. The Vision 2000 Environmental Scan suggests that "labour market opportunities for this age group may improve in the 1990s given the decline in their numbers, placing downward pressure on their post-secondary participation rates."[39] In their bid for students with advanced backgrounds, competition may increase between universities and colleges. On the other hand, higher retention rates, better career counselling and fewer jobs may mean that more students will seek post-secondary education.

The population aged 25 to 54, in contrast to the 17 to 24 age group, is expected to increase by almost 25% between 1987 and 2000. According to the Scan, "structural changes in the economy arising from the increased pace of technological change and increased competition in the global economy, when combined with large numbers of baby-boomers reaching a plateau in their careers, will spark this age group's interest in additional training/education."[40] This suggests both that "older" students may make up more than the present 15% of college students and a great potential exists for colleges to increase enrolment in their part-time courses. The Scan adds that "significant potential also exists for colleges to develop full-time programs of relatively short duration. Colleges will need to assess how best to market such programs in terms of factors such as location of training (at the work place, at the college), scheduling (time of day, time of year), teaching methodologies, and certification procedures." Structural changes in the economy will also mean that the colleges will require strong liaison with business and industry in order to keep pace with the needs of the market place and better monitoring mechanisms for labour force requirements.

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[39] Ontario Council of Regents, *With the Future in Mind: An Environmental Scan*, (Toronto, 1989), p. 27.

[40] *Environmental Scan*, p. 28.

The population aged 55 to 64, like the 25 to 54-year-olds, is expected to show steady but gradual growth between 1987 and 2000, followed by a period of rapid growth in which it is expected to increase by almost 50% in the decade. The Scan suggests this age group may be the one most adversely affected by structural changes in the economy. "Colleges should probably expect from this age group increasing demand for both retirement preparation/leisure courses and employment specific training of short duration."[41] The content of other programs such as health, leisure, social services and fashion design will require adjustment to reflect the special needs and the increased knowledge that will accrue about the older adult.

By 2011 seniors aged 65 and over will account for 15.6% of Ontario's population, a 79% increase over 1987 figures. The social impact of this change will mean, for example, that pressures on health care expenditures will intensify and demand for health care personnel providing services to seniors will increase. The Scan predicts that "short 'retraining' programs for seniors, as well as 'leisure' courses, may be in high demand."[42]

Overall, it is likely that change will be more rapid in many areas in the decades to come. Projections can show only a limited profile of change. In order to meet the challenges of the future, colleges must be prepared to be more flexible; more responsive to the social repercussions associated with change such as stress, social dislocation, employment transition; and more involved with research about change.

2.3 Potential Clients

Apart from the age-specific indications above, several groups of potential clients have been identified. Interviewees pointed out that the colleges are not as open to the diversity of the community as they might be. It was suggested that each college do a social audit and look at the gender, ethnic, racial and class makeup of their communities and then of their student body. While it was acknowledged that there could never be a perfect match because some minority groups do not place the same value on education as others, where there are mismatches the colleges need to determine whether they are a result of the kinds of programs they offer or who they choose to admit. Other sources of inequality must also be considered.

One interviewee shared the following:

> ... certainly the whole basic level area is one that I think the community colleges have to address so that college opportunities are available to young people with limited skills and perhaps limited competencies. I think the other area is the whole area of adult literacy. What is the role of community colleges in that whole area? What is the community college doing to deal with an increasingly multicultural province whose first language is not English? ... What is the community college system doing ... to help those young people understand that college is a very important alternative and a key to a career? What are they doing for the graduates of our multicultural school systems to help each of those graduates be successful in their own areas in a college program? How many translated calendars are there in Ontario? How many translated newsletters from individual colleges are there in Ontario?

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[41] *Environmental Scan*, p. 29.

[42] *Environmental Scan*, p. 30.

According to the chairperson of the College Committee on Special Needs:

> The Abella Report, judicial decisions, legislative changes and advocacy groups signal that political pressure will continue to be exerted on post-secondary educational institutions to accommodate the adult learner with special needs.
>
> This student population will increase dramatically over the next decade because with a post-secondary education, these students are much more employable.[43]

Interviewees also named the handicapped, the French community and native people as groups who could benefit from greater participation in the colleges. Vision 2000's Study Team 3 is examining ways to assist the handicapped (those with limited mobility, agility, sight, hearing and speaking), the learning disabled, the French language community and native peoples.

2.4 The Need for Multiple Entry and Re-entry

Graham Collins cited a recent study which suggests "that 10% of Canada's manufacturing workforce of 2 million people may be involved in retraining in the early 1990s simply as a result of the increasing adoption of computer/integrated manufacturing."[44]

According to another study cited by Collins, "the source of Ontario's diverse manufacturing capability — the $4 billion a year machinery and equipment sector — is seriously threatened by skilled manpower shortages. The study identified a probable shortfall of 2,500 journeyman machinists and tool and dye makers by 1991 among 829 companies in the machinery-equipment sector."[45]

According to a recent study by four Toronto colleges and the Metro Toronto Community Industrial Training Advisory committee, there are insufficient workers to fill a "critical shortage" in 22 occupations including mold makers, computer operators, architectural technicians, sewing machine operators and technical sales people.[46] A shortage of 14,000 trained nurses across the province has also been noted.

It is estimated that the contribution of new entrants to the labour force will decline by 25% over the next ten years. Given present estimates of skilled labour shortfalls, combined with current government policy with regard to immigration (allowing fewer skilled labourers into Canada), adult training and retraining will have to meet a greater proportion of future needs. Since the majority of Ontario's firms, especially small businesses, have no human resource strategies and little training expertise, most of Ontario's workers, if they are going to develop the skills needed to keep up with change and economic competition, will have to turn to the colleges for retraining. Therefore the need for multiple entry and re-entry points to the college system already exists. The growth rate for part-time enrolment in Ontario colleges has been larger for the past ten years than that of any other major enrolment categories.

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[43] Karen Shaw, "Issues of the Future," College Committee on Special Needs, 7 April 1988, p. 1. Cited in Graham Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," (Toronto, 1988), pp. 29-30.

[44] Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," p. 11.

[45] Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," p. 11.

[46] Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," p. 12.

There is also a critical need for multiple entry and re-entry programs in secondary schools. One interviewee from the secondary panel said,

> There are very few secondary schools that offer multiple entry programs and I think that is a specific retention strategy that needs to be taken a careful look at. We have one in this school, it is called a re-entry program and there are four entry points over the course of the year for young people who want to come back to school. That requires real flexibility by staff and department heads ... It's tough being flexible if you are locked into a course outline that is laid on by the Ministry of Education. But it is becoming increasingly possible under *OS:IS* to offer partial credits for portions of programs and that will make consecutive and multiple entry easier.

Another interviewee pointed out that a need for more re-entry points in the secondary system is necessary because

> There are students who very much want to be out there; they want their independence, they want money, or in some cases ... because of need they have to be out there working. We may not be able to have an education system that can compete with those kinds of motivations. What we have to do is make sure that if the students do drop out, well, first we have to insure that as many stay in as possible, and we have to revise our curriculum, we have to make sure it is relevant ... but when students do drop out we have to make sure that it's easy for them to come back in. That's, I think, the crucial point, encourage them to come back. Always make them feel that if they choose not to continue as a student after grade 10, that there is always a welcome later on for them. Because, I think you'll find that adult education has increased enormously over the last decade. I think you'll find a very strong trend to people coming back into the system, continuing education, some of them for credit courses, some for non-credit courses. And I think we have to get across the fact that it's a lifelong process and not to consider the education system a failure if some students do not stay in it. I think what we have to do is to improve the system so that more will stay in it, but to expect all is not realistic.

A Ministry of Education official identified continuing education as one of the major areas of concern for the Inter-Ministerial Committee. In our discussion, he pointed out several sides of the issue. He said,

> If you don't provide the re-training, not only the re-training but the support required to keep a family going during the re-training period, then you can hardly expect that it can be politically possible for the economy to respond in time... The problem is how can you be interested in lifelong learning and not have any ways in which a working adult can really participate effectively in the system. ...if [it] is true that people are going to be changing careers much more often and that there are going to be fewer young people, then presumably lifelong learning becomes much more crucial for the economy as a whole, let alone for individual people, than it was before. And in that case, what we need is just more things for adults. ... what we need is a much more flexible set of arrangements within the existing institutions so that older people can find their place in them. And there are a couple of interesting type examples. You can go into almost any high school now and see people obviously over the age of 35 studying with other kids. And there are also in the province a few high schools that only accept adults, at least three that I can think of. ... We have to rethink all we know about part-time education because part-time students, of course, don't get much attention and don't get much help and don't get much resources.

There can be no doubt about the need for multiple entry and re-entry points to the education system in Ontario. The problem, however, is not a single sided issue. Both the secondary schools panel and the colleges must find ways to meet the many needs of the economy and individuals. There also needs to be more government, business and industry sector support for not only continuing education and part-time education but for the families affected by the need to train and retrain.

2.5 Significant Factors in Choosing College Programming

According to Noemi Stokes and David Foot, in "Regional Differences in the Determinants of Post-secondary Educational Choice in Canada: Community College Versus University," there are many variables that determine choice of institution and there are prominent regional differences in Canada that affect choice.

From an extensive review of the literature, Stokes and Foot conclude that there are three general categories of determinants: student characteristics and family background, financial factors and student's evaluation of institutional characteristics. One researcher in the United States, cited by Stokes and Foot, identified three phases with different factors predominating in the student's decision at each phase. Hassler claims that "at the initial phase of choice, when the student is deciding whether or not to take further education, a number of factors including the student's socioeconomic background, attitude and attributes, high school characteristics and academic ability figure foremost." In the next phase, when the student has made the decision to attend a post-secondary institution, the search for an institution begins and the factors which become prominent at this stage are college or university communication strategies (such as campus visits and written information), the reputation of the institution and information on the net cost of attendance. In the third phase, the student narrows the choice to one of several alternatives and institutional recruitment practices and net cost are especially important factors.[47]

Applying this institutional choice model to data derived from a nation-wide survey of approximately 65,000 post-secondary students collected by Statistics Canada on behalf of the Secretary of State in the spring of 1984, Stokes and Foot found, for first year, full-time Canadian students, statistically significant factors affecting college/university choice in Ontario are related to paternal education (maternal education, although it was considered, was not significant in Ontario), ethnicity, gender, age, activity in the previous year, parental income and institutional characteristics including: reputation, proximity to home, student aid and cost.

Specifically Stokes and Foot found there is a strong tendency for a student to choose university instead of college the higher either parent's level of education is. The ethnicity of a student and his or her ancestors affects institutional choice, but not nearly to the same degree as the educational attainment of the parents. In general, students from English, French and German backgrounds appear to prefer community colleges compared to other minorities, while Scottish and Ukrainian individuals appear to be more likely to enrol in universities. Women are more likely than men to choose both university and college in Ontario. As a rule, younger individuals tend to go to community colleges and older individuals tend to attend universities. Most students, particularly university students, go directly from high school to post-secondary education. The probability of attending university rises with increases in parental income. Students who identify institutional reputation as a factor in their selection of a post-secondary institution, tend to attend university. The proximity of the institution to the student's permanent residence is more important to students attending college than university. (It was the opposite for students in the Atlantic and Western provinces.) Students who indicate that financial aid or cost is a factor in their choice are more likely to attend college than university.[48]

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[47] D. Hassler, "A Research Review of Student College Choice," a paper presented at the American Society for the Study of Higher Education, Chicago, Illinois, 1985. Cited in Noemi Stokes and David Foot, "Regional Differences in the Determinants of Post-secondary Educational Choice in Canada: Community College Versus University," a paper prepared for the Ontario Council of Regents, (Toronto, March 1989), p. 7.

[48] For a detailed discussion of the effects of economic determinants and public policy on university and college attendance, see Stokes and Foot, pp. 20-25.

Paul Asinef analyzed data on career community college students in Canada from the 1974/75 and 1983/84 Post-secondary Student Surveys. Asinef's study includes 13 variables on male and female students in 14 fields of full-time study and six fields of part-time study. Statistically significant relationships were found and student profiles can be constructed from Asinef's findings. However, Asinef does not break down the data by province or region, and given that Stokes and Foot found significant regional differences in their study, definitive conclusions about Ontario students cannot be drawn from Asinef's findings. Since 80% of the students in the study are from Ontario and Quebec, further study of Canadian patterns may be relevant to Ontario student profiles.[49]

The reasons for choosing one college over another in Ontario have not been studied. Factors in choosing specific programs in Ontario colleges has likewise not been studied.

2.6 The Role of Student Choice in Determining School and College Programming

In considering the role of student choice, initially three positions appeared to be possible: more choice, the same as now and less choice. In the course of the interviews a strong preference for a fourth alternative, "informed choice," surfaced with regard to both secondary and college programming. Representatives from both panels argued that students must ultimately have the right to choose courses and programs, but in order to make good decisions they must have sufficient and accurate information. It is in acknowledging this that the guidance function takes on greater importance. New policy and initiatives pertaining to better communication of information have been and are being implemented in the secondary and college sectors. Some of these are discussed in sections 3 and 4.

Another point that was made in this context is that the institutions are responsible for making relevant and appropriate programming available. The responsibilities of schools and colleges in this regard are discussed in section 2.7.

In support of the argument for informed choice and in response to the question "What role does student choice play in determining the program?" one secondary school guidance counsellor remarked,

> They call the shots! Student choice is the single most important criteria for college programs. What role do counsellors play in helping to find that choice is a different kind of question. But at the very end of it, it is students and parents who make the choice. And they have total and complete right to make that choice. I think it is very important for counsellors to be involved in the information sharing and the exploration of strengths and weaknesses and the matching of the two to appropriate programs, but at the very end of it the young people we work with have the choice and the responsibility to do well.

A convincing counter-argument against freedom of choice can be made based on the discovery that

> Some [colleges] are contemplating closing down technology programs because student numbers in them have dwindled at the same time that employers are banging on the doors looking for graduates from those very programs.[50]

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[49] Paul Asinef, "Career Community College Students in Canada, A Decade of Change: An Analysis of the 1974/75 and 1983/84 Postsecondary Student Surveys," (York University: North York, Ontario, 1988).

[50] *Globe and Mail*, "Technical Programs Lack Students Official Says," 12 May 1988, p. A10. Cited in Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," p. 25.

Those concerned with college enrolments, unemployment rates, and economic stability and competitiveness, would likely argue for limited choice in order to fill the greater social needs. However, when presented with this dilemma, some of the interviewees retorted by arguing again that students must be free to make the final choice. One Ministry of Education representative put it this way,

> The student wants program "A" and you are wondering why you don't get enough in program "C." And you think there is a desperate need for program "X" to which no one has applied. And so the whole frequently common denominator mismatch between student choice and social need. I'm not so worried about such mismatch because I think if we offer the right set of programs they work out over time. And the lag is the price that you pay for being able to be free. And there is a price to freedom and that is it.

The position supporting freedom of choice also appears in the *Basic Documents*. Davis cites the following passage by John Robarts:

> It is the task and the purpose of this government to provide whatever opportunities are necessary to enable each individual, through education, to develop his potentialities to the fullest degree and to employ his talents to the greatest advantage, and we plan to accomplish this through free choice, not by coercion and regimentation of our fellow-citizens.[51]

While there does appear to be a mismatch between current economic needs and student choice, perhaps most noticeable in technology, the longer term balance may see a resolution of the difference without any interference. With more effective secondary programs, stronger linkages between secondary schools and colleges and better information about careers, including market needs, resolution may be found more quickly.

2.7 Responsibilities of Schools and Colleges in Providing Options to Clients

Institutional responsibility centres on providing relevant and appropriate programming options to students. Institutional diversity was cited as a necessary adjunct. It is thought that there is a need to clear up the present ambiguity around institutional responsibility for the provision of programs such as secondary education for adults and remediation.

The context of relevant and appropriate programming was set by one interviewee who said,

> The fact that all these folks are going to be unemployed for part of their lives, the fact that they need to function, for Canada to function well, they need to have a real grasp of our economic and social systems. They need to know geography and history ... The fact that they are going to have to function in a family context in their community in a variety of ways and there are skills associated with that that they are going to have to learn as part of their education. All of those things have to be fed into the equation and no one of them should drive it.

Recent changes in secondary education, specifically around the shift to a more generic skill base, emphasize that education must be a preparation not for one specific job but rather a preparation for greater participation of the individual in broader social and economic goals. Although business and industry have argued that students are poorly prepared to enter the workforce because the student can't walk into the workplace and start doing their job the next day, others have pointed out that youth are not very well prepared for the workforce in the sense that they don't have the kind of life skills and literacy skills that they need. As one interviewee put it,

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[51] *Basic Documents*, p. 7.

> The role of the secondary school is to equip people generally to function in society, which includes to function economically. The role of the college is to give them more specialized education and training in a direction that the student has decided he or she wants to go. ... The job of the college is not to prepare somebody to be a meat cutter at Canada Packers. They may train them in meat cutting skills, they may train them to be an electrician, but not an electrician at Toyota. Somebody goes through a meat cutting course or somebody becomes an electrician and does their apprenticeship or takes part in a college course or somebody becomes a technologist or a secretary or whatever. They then go get a job at Canada Packers or Northern Telecom. The company then has responsibility to train them on the employer specific skills that they need. That shouldn't be confused with the role of the colleges ...

Apart from the responsibility that schools and colleges have to educate youth in a way that will prepare them to participate in Canadian society, it was argued that "the system has a responsibility to prevent the proliferation of inappropriate programs." This theme was elaborated upon by another interviewee who said,

> The colleges in this province have far too many dead-end programs. It's not that they are bad programs, it hasn't got to do with that. It is that they just don't lead to second, third, fourth, fifth and sixth jobs. They certainly lead to the first or they tend to lead to the first.

Demographic forecasts, indicating that most people will need to re-train several times in a lifetime, support both the argument for general education in the secondary schools and the colleges and the argument that educational institutions are responsible for providing programs that are appropriate for Canadian society, the economy and the future.

While students may face having less choice in terms of the specific subjects available to them, it was argued that they should have more choice in terms of institutional environment. A Ministry of Education official said,

> I would like to see more alternative schools, more smaller schools so that people can access communities that make sense to them and sort of take their motivation up and work with them.
>
> [In terms of the colleges,] to me the issue isn't central control versus autonomy. It is how do we achieve a system that has two aspects to it that tend to be a bit contradictory to each other. One is differentiation and the other is geographic access. You see, if you have differentiations, different colleges are doing different kinds of things... I'm not trying to avoid duplication, which I think is a problem vastly overrated, the colleges should begin to represent different ideas about how it is you go about doing things.

A final point brings up the issue of which educational institution should be responsible for the provision of non-traditional programs. The present situation leaves undefined the roles and responsibilities of schools and colleges for programs whose need has only recently been recognized. One interviewee said,

> I think we probably should work out a clearer definition for ... who has the major responsibility for various roles. Who does have the major responsibility for remediation, for example? Or who does have the major responsibility for high school level education? That's another example. A clearer working out of those would probably be a good idea. But I don't think absolute clarity is achievable or advisable because it would provide the customer with no option. And the customer, where possible, should have options.

Introduction

In 1965 William Davis stated that the colleges are "planned to meet the relevant needs of all adults within a community, at all socio-economic levels, of all kinds of interests and aptitudes, and at all stages of educational achievement." He further stipulated that the colleges would be "for adults as well as for youth, and for the upgrading and updating of workers either on the job or in evening courses, as well as for the unemployed."[52]

The mandated responsibilities for admission for every college are 1) to meet the needs of graduates from any secondary school program, apart from those wishing to attend university and 2) to meet the educational needs of adults and out-of-school youth, whether or not they are secondary school graduates.[53]

The *Basic Documents* specifies that colleges are: 1) to admit any person who is the holder of an Ontario Secondary School graduation diploma (Grade 12); 2) to admit any person who is the holder of an Ontario Secondary School honour graduation diploma (Grade 13); or 3) to admit any person who has attained the age of nineteen years on or before the date of commencement of the program of instruction in which he plans to enrol...[54]

Grade 12 and grade 13 graduates and adults without secondary school diplomas are admitted to college programs. All Ontario residents do not, however, have equal access. Colleges establish pre-requisites for programs and admission is dependent upon meeting certain criteria. Even when students fulfil the requirements, wide variations in ability and experience exist. Underprepared students are likely to drop out as are those whose expectations are for greater challenge. Instructors find it difficult to teach and maintain standards when students function at extremely varied levels. Colleges find themselves caught in the dilemma of whether to restrict admissions to those who are considered ready for college or to admit students based on qualifications and provide remedial assistance to those who need it. A third alternative is to have an "open-door" policy and once again provide remedial assistance to those who are not prepared. Present funding arrangements, however, do not directly cover remedial programs. Where colleges do provide them, they do so at the expense of other programs.

Another issue at variance with the implementation of the mandate is that part-time students and evening students do not have equal access to educational opportunities or other student services. Part-time day students generally hold full-time jobs and cannot take advantage of support services or take on extracurricular activities. Support services and extra-curricular activities are often not available in the evening. Evening courses are sometimes not of equivalent quality to that of day courses because regular teaching staff, as a rule, do not teach in the evening. Since access has been defined by some as not merely the opportunity to enrol, but rather, the opportunity to succeed, the issue of "access" beyond enrolment must be examined.

In this section we will explore these and other significant issues related to access, competence and success in order to evaluate mandate options.

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[52] *Basic Documents*, pp. 8-9.

[53] *Basic Documents*, p. 13.

[54] *Basic Documents*, p. 38.

3.1 Access to College Programming

"Who is it the colleges are supposed to serve?" has been a long-standing question. While the mandate quite clearly specified that the colleges were to be for all who wanted to attend, qualified only by "capability to profit from it," reality has proven to be otherwise. Half the full-time post-secondary college students hold a grade 12 diploma. Eighteen per cent enter college with a Secondary Honours Diploma (grade 13) and another 11% enter having completed grade 12 but before finishing grade 13. Only 4% enter without a secondary diploma.[55] A small percentage of students enter college having attended or graduated from another post-secondary institution or university, holding a professional certificate, or in conjunction with an apprenticeship. Others enter college based on a CAAT qualifying exam or after participating in a non-post-secondary program.

The question has been raised as to whether basic, general and advanced level students have equal access to college programming. In 1984, *OS:IS* announced that secondary courses, "where circumstances permit and where it is considered desirable," may be offered at one or more level of difficulty; at a basic, general or an advanced level. Grade 13 courses are all "Ontario Academic Courses" (OACs). Students, depending upon their interests, goals and abilities, choose courses and levels. Most students take courses at different levels, usually a combination of two. The Ministry of Education has not kept records on student enrolment according to course level and students are not identified as basic, general or advanced level students.

Based on Ministry of Colleges and Universities' admissions policy, college calendars state that applicants to college must either have an Ontario Secondary School Diploma (OSSD) or be a mature student (be 19 years old on or before the commencement of the program in which the students intends to enrol). The Ministry policy further states that "program eligibility" criteria shall be established by each college on a program specific basis. Some colleges, however, have established minimal entrance requirements for all programs. Seven of the CAATs state that the OSSD must be at or above the general level and another ten colleges state either that a majority of OSSD courses must be at the general or advanced level or that they require general or advanced standing for almost all programs. Three colleges specify only that senior level or grade 12 English, mathematics and science is a requirement and two colleges further add that these courses must be at the general level. Nine colleges have some courses which require only a basic level OSSD, grade 10, or BTSD level 3 or 4. Health science programs in all colleges usually require senior level science courses and many of the technology programs require students to be functioning at the advanced level. Many programs have further recommendations which are not pre-requisites. For over-subscribed programs, such as nursing, colleges take only the top applicants in rank order. Many students, who are otherwise qualified, may not be accepted in a year when other "better" qualified students apply.

Confronted by the stated pre-requisites, it is conceivable that students who have taken most or all of their courses at the basic level feel excluded from college. Given that almost all college programs require general level or senior courses, some guidance counsellors do not direct students who have taken basic level courses to college. Other guidance counsellors believe that the "rules" are more flexible than what is printed and do help students without the minimal requirements find a way into college. Some colleges have recently developed courses specifically for students with basic level backgrounds.

Other than what is in print, another serious obstacle to college access is that students, secondary teachers and guidance counsellors, and the public believe that the colleges are meant for general students almost exclusively. For the most part, students who have mostly basic level courses or advanced level courses do not consider applying to college. The OS:IS surveys[56] report that many students who have taken advanced and general level courses and would be realistic candidates for college but not university indicate that they intend to go to university, not college. In spite of stated requirements, it is widely accepted that the students who are most successful in most college programs are those who have had at least advanced level English and math. Guidance counsellors are caught in a bind of whom to advise to apply for college.

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[55] These figures represent a ten year average, between 1978 and 1987, for full-time post-secondary Fall enrolment. Students may have entered college directly after secondary school, after having been in the workforce or after an unspecified activity.

Since there are indications that colleges presently do not serve equally all who might want to attend nor do they serve all secondary graduates equally, one may well question whether the mandate needs to be revised, whether colleges must do a better job of marketing their services and whether the colleges have to adjust programs to meet the needs of a greater number of people.

3.2 Program Relationships Between Schools and Colleges

Although all secondary schools in Ontario presently do not offer the same courses, *OS:IS* guidelines do specify curriculum content for all possible courses. For example, "Math for Technology" - MTT4G - should be the same wherever it is offered in the province. In contrast, college programs are developed by each individual college and courses have little consistency throughout the province.

Since the outset, college programs have been developed in conjunction with business, industry and professional organizations through local "program advisory committees." Terminal performance objectives have dictated and continue to dictate the content of college programs. Entry level qualifications have been considered only after the establishment of programs and courses. Secondary school personnel have seldom participated on program advisory committees. Any relationship between secondary school and college programming has been partially coincidental in that it has not been specifically planned.

Co-ordination of secondary and post-secondary programs was the subject of Project III - The Nature of Programs - of the *Secondary/Post-Secondary Interface Study* jointly commissioned by the Ministry of Education and the Ministry of Colleges and Universities in 1975. The primary investigator, Alan King, concluded that "subject coordination across institutions and across institutional levels at the interface is almost non-existent. Although in many instances effective courses have been developed, this lack of coordination has created uncertainty and discontent among educators."[57] King found many examples where there were gaps in content covered and/or inconsistencies in the level of competence aimed at in the teaching of English, physics, physique, mathematics and mathematiques. Some of the inconsistencies King found in 1975 may not exist since OS:IS was introduced; however, it is likely that mismatches still exist between the approaches and emphases used at the secondary school and college levels.

Articulation teams are currently addressing the problem of the existing gaps between curricula. At one level articulation can align existing secondary courses with college programs. Some articulation projects strive to list all skill profiles and outcome objectives in both secondary and college courses and make adjustments where necessary to create a better "fit." A more lengthy discussion of the objectives of articulation can be found in section 4.4.

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[56] *A Study of the impact of OS:IS implementation on the Post-Secondary System in Ontario*, (Phases I-IV).

[57] Ontario Ministry of Education and Ministry of Colleges and Universities, *Secondary/Post-Secondary Interface Study: Summary Report*, (Toronto, 1975), p. 107.

3.3 Stated Program Pre-requisites and Functional Pre-requisites

Presently program pre-requisites are set individually by each college. The Ministry of Colleges and Universities' "system eligibility requirement" states that applicants must:

1) Have an Ontario Secondary School Diploma - which is deemed to include an Ontario Secondary School Graduation Diploma (OSSGD) or an Ontario Secondary School Honours Graduation Diploma (OSSHGD);
2) Be a mature student — reach the age of 19 years on or before the commencement of the program in which the student intends to enrol; or
3) Meet any lesser minimum requirement as established by a college on a program-specific basis.

Specific pre-requisites are set by deans or heads of divisions. Reviews of *OS:IS* course guidelines and past experience are the basis for most decisions. Sometimes secondary personnel and other colleges are consulted. The process is informal and may reflect biases. It has been argued that although colleges are responsible and accountable for the determination, implementation and application of program-specific eligibility criteria, the pre-requisites may not always be justifiable.

Program pre-requisites as described in section 3.1 above, for the most part, call for general level secondary diplomas. Some colleges specify only general level English and general level math. For technology programs, advanced level English, math and science may be specified. Also for Health Science, senior level science courses are required. It is generally believed by secondary staff and college faculty that students who are the most successful in college programs are those who have advanced level backgrounds.

The following passage from a Vision 2000 interview highlights the experience of one of the articulation teams. When secondary staff and college faculty were examining math for technology guidelines, they discovered that

> Interviewee A: ...the general level math for technology was a better course than heretofore thought. Up to that point it was only advanced level math that would really give credence to a student. But in examining with the faculties that guideline, it suddenly seemed more useful, whereas the business math [another general level course] seemed less useful. So it said to us, "Should we be channelling students from the business math if the technical math gives them a broader spectrum of opportunity?" So we learned from our dialogue and gained confidence in one another.
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> Interviewee B: ...up until then they [the colleges] would only take advanced level math students. But once we could show them that the math of technology curriculum, which is basically a general level curriculum, and they saw what was involved and we talked about what should be stressed, then they said they will accept that.

This example illustrates two of the major problems with respect to program pre-requisites. First, that differences exist between stated and functional pre-requisites and, second, that the content of secondary programs often hasn't been assessed for college program requirements.

Questions have been raised as to whether colleges should continue to support departmental assessments of pre-requisites, whether they should develop a college-wide procedure to determine requirements for each division or whether pre-requisites should reflect a minimal standard for the entire college. The issue has also been raised as to whether pre-requisites should be set on a provincial basis. This will be discussed further in section 3.4 below.

3.4 Communication of College Pre-requisites

Information on college program pre-requisites is communicated to school curriculum personnel, chiefly in the following eight ways.

Guidance counsellors are the primary recipients.

1 Horizons is published annually by the Ministry of Colleges and Universities and is sent free-of-charge to all secondary schools and all grade 12 students. It gives general information on CAATS, universities, Ryerson and other post-secondary institutions and work-study programs in Ontario. It lists career programs and identifies colleges where they are offered. It also provides college by college programming and pre-requisites.

2 Spectrum, published by OISE Press Guidance Centre, is similar to Horizons although it is arranged only by career. In the Ontario volume, all post-secondary programs in Ontario are listed with pre-requisites identified for each. The series also includes Quebec, Western and Atlantic volumes. The Spectrum series is available by mail order; the Ontario volume is sold for $9.75.

3 College calendars are sent to all secondary schools in the province, more or less routinely. Marketing departments of some colleges have put together comprehensive information packages for counsellors and students which are sent to schools annually. Each calendar lists programs and their pre-requisites and other information about the college.

4 College information sessions are conducted by college personnel throughout the year at individual secondary schools or central community locations. Annually, all colleges are represented at the "College Information Program" which tours the province to make presentations in over 150 locations. Although information sessions are primarily aimed at students and their parents, teachers and guidance counsellors are present while college representatives give information specific to their college, including full-time programs, admission requirements and college life on their campus(es).

5 CHOICES is a specially designed computer program consisting of two parts: careers and schools. The education portion supplies information on admission requirements for specific institutions. It may include subject, minimal grades, portfolio, interview, and test requirements and any additional courses that may be suggested but not required. As of September 1989, CHOICES will be available in approximately 450 secondary schools in Ontario.

6 OSCA, the Ontario School Counsellors' Association, publishes a newsletter and sponsors an annual meeting for all members. Local workshops are sponsored several times a year. Information pertinent to the counselling function is conveyed to OSCA members from the central organization or its more than 25 local affiliates.

7 CommuniCAAT is a newsletter published annually by the Provincial Committee of Registrars and Admissions Officers (CRAO) and is sent to all Ontario secondary school principals and heads of guidance. It is designed to provide summarized admissions information for the colleges and includes information on application procedures, new programs, intake dates other than September, changes in admission requirements, program changes and special announcements. It also lists college contacts and college addresses and provides an up-to-date telephone directory.

8 Informal relationships between secondary teachers and college personnel is an important means for sharing information about college programs and entrance requirements. Secondary personnel increasingly are visiting college campuses to participate in formal information sessions offered by the colleges to guidance personnel and in conjunction with tours and programs prepared for secondary students.

In addition to these eight communication channels, the need for a college program for secondary guidance counsellors similar to "DIALOGUE," sponsored by the university registrars, has been identified by a guidance specialist at an Ontario university. Dialogue is a two-day residential training seminar during which representatives from the universities meet with guidance counsellors from around the province.

There doesn't appear to be a shortage of information sources to guidance personnel on college admission requirements. Secondary school guidance departments generally take advantage of several, if not all, of these sources. Whether the material is used cannot easily be determined. One Ministry of Education guidance director pointed out that "no matter how much information there is, there will never be enough personnel to deliver it to the students. No one can ever know enough about the over 7000 career possibilities." She emphasized the importance of making information directly accessible by students through electronic media in school guidance departments and Career Centres, such as the one in Niagara Falls sponsored by the Niagara Peninsula Industry Education Council and the Boards of Education in the area.

Another major problem for students and guidance counsellors alike is that there are too many variations; the process of college selection and application is too confusing and time consuming. Students, beginning in grade 9 must consider career options. Long before they have finished the process of defining their interests and identifying their skill areas, it seems that they must choose a post-secondary institution in order to know what courses they must take in high school. It is not uncommon for students to discover in grade 12 that they lack pre-requisites for a program in a college that they have only recently considered.

It has been suggested that there is a need for a single application centre, such as the one in Guelph, for universities. If colleges could agree to a single set of pre-requisites for program areas, the application procedure would be further simplified and guidance counsellors could better ensure that more secondary students were taking required courses.

3.5 College Assessment Techniques

Presently there are no standard techniques used by all colleges to determine whether new students have the skills to succeed in college programs. Some colleges for some programs, apart from course and grade pre-requisites and the submission of secondary transcripts, require, either before enrolment or during the first term, one or more of the following: reading and math achievement tests, writing samples, an interview, letters of recommendation, an audition or portfolio, a completed questionnaire.

There is no literature on the assessment techniques used in Ontario colleges, although some colleges have reviewed techniques used in other jurisdictions and have evaluated the effectiveness of their own use of various techniques. Nothing has been formally documented. Vision 2000 Study Team 5 requested scores of standard tests used at the colleges. The results are described in section 3.7 below.

In "Some Unique Features of Colleges of Applied Arts and Technology," William Davis outlined some guidelines for admission assessments. He wrote,

> Adequate counselling services are critical. Admission to a College must be based on the ability profile of the student in a selected field of endeavour, rather than on prescriptive entrance requirements alone. ... This suggests a full range of diagnostic tests, coupled with personal interviews. It suggests further, a team of counsellors as the only viable method, with counsellors who are fully qualified in normal and social psychology, testing and evaluation, employment needs

> and conditions; and, since many students are often emotionally or physically handicapped, counselling entails the availability of psychiatric services.[58]

Actual college admissions procedures are considerably different from Davis's prescription. Counsellors, for the most part, are not involved with admissions. Secondary achievement is considered more often than ability profiles. Diagnostic tests, when used, include reading and writing, but are not necessarily used to direct students to remedial services. What, then, are the implications of Davis's prescription and present practices? Should admissions procedures be both standardized and more reflective of student ability profiles? Should college guidance counsellors play a more active role in admissions? Should admissions procedures include diagnostic tests that are then used to refer students weak in some areas to remedial courses?

3.6 Secondary School Assessment Techniques

A guidance counsellor from a large Metropolitan secondary school offered the following about secondary student assessment.

> Interviewee: Well for the past, I guess it has probably been, for the past 20 years, there has been no exit examination process in the secondary school systems of Ontario. And for that reason exit requirements are determined by individual schools and individual teachers within individual schools, and teachers of individual subjects. There has been some move provincially to provide a set of standardized tests that can be administered to students several times during their secondary school career, however, those tests, the battery of tests, haven't been used to any great extent across the province. As a result, exit requirements, excluding the new OACs, ... are determined by individual teachers in individual schools under the department heads and the principal. Will the exit requirements from here be significantly different from exit requirements from a school in northern Ontario? The answer is probably "yes," although they will teach from the same guideline from the same provincial document. Is there a need to change that? I don't think so. I think it is important in Ontario that we look at individual students and not take a look at a set of standardized results that are applied against them and measure competence. Will we ever have standardized examinations again administered at the end of the grade 12 year? Probably not in the foreseeable future. I can tell you too that the whole development of the Ontario academic credit, the OAC, that is replacing the grade 13 credit, is an attempt to address common expectations and common competency levels and those programs and those guidelines have been written by teams of secondary school teachers in co-operation with university faculty. And for that reason there has been agreement that there are certain criteria and certain competencies that can hopefully guaranteed at the end of the program. That process has not been used in any other course at any other grade level.

A Ministry of Education representative said much the same and emphasized that both teacher assessment and the absence of standardized testing in secondary schools is current Ministry policy and is not likely to change in the near future.

A significant finding of Project II: The Nature of Student Achievement of the *Secondary/Post-Secondary Interface Study* was that "even without making adjustments to control for variation in marking standards, predictions regarding applicants' performances in university which are made on the basis of raw school marks are just as accurate as predictions made in the past on the basis of departmental examination results."[59] Project II co-ordinator, Ross Traub, concluded that "teachers are sensitive to the real achievement levels of their students and report these levels on scales which are realistic and meaningful for their class groups." Traub found that there are "hard" and "soft" secondary schools and warned that post-secondary institutions "should consider more than marks in competition for placement."

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[58] *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology," p. 34.

3.7 Student Preparation for College

While there are potentially numerous methods of assessing student preparedness, we presently have two main indicators. We can look at attrition rates and scores on entrance tests.

Attrition in Ontario colleges has been studied by Robert Stoll and Elisabeth Scarff (1983), Peter Dietsche (1988) and Howard Rundle in a Vision 2000 project (1989). Stoll and Scarff studied attrition in the entry cohorts between 1974 and 1979.[60] They found that overall the proportion of students withdrawing from CAATs was quite stable, ranging from a low of 44% to a high of 47%, for the years studied. Males were more likely than females to withdraw; for students with a grade 13 background, males were more than one and a half times as likely to withdraw than females. There were no substantial differences in the pattern of withdrawal on the basis of age, although there was a slight decline in the rate of withdrawals for the students in the 21 - 24 year group. Students who entered college from grades 12 or 13 are about one and a half times as likely to withdraw as students entering from university or some other post-secondary institution. Students with a grade 12 or partial grade 13 background were also about one and a half times as likely to withdraw as students with a complete grade 13 background. The Health Sciences had the lowest rate of withdrawal, about 25% of net enrolment.[61]

Rundle, using the Stoll and Scarff methodology,[62] carried the study forward to fall 1984 college entrants. His findings corroborated the earlier findings. Between 1976 and 1984, attrition varied between a low of 40.7% and a high of 44.7%; on average 43% did not graduate. Attrition in one-year programs ranged between 25.1% and 28.7%, in two-year programs between 40.7% and 45.6%, and in three-year programs between 44.0% and 53.7%. The following table indicates attrition rates for the 1982 entry cohort, found to be typical of the rates throughout the 1976 and 1984 period.

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[59] *Secondary/Post-Secondary Interface Study: Summary Report*, p. 75.

[60] Robert Stoll and Elisabeth Scarff, "Student Attrition From Post-Secondary Programs at the Ontario Colleges of Applied Arts and Technology." (Toronto: Ministry of Colleges and Universities, 1983).

[61] Vision 2000, Study Team 1, Project #17 Highlights, "Post-secondary Student Attrition in Ontario's College System," (Toronto, 1989).

[62] Rundle altered the Stoll and Scarff methodology slightly. Students reported as "still active" were subtracted from the cohort of new entrants to determine the net of new entrants and since the results do not vary much from the Stoll and Scarff study only variables found to be significant in the previous study and data from alternate years were analyzed. Howard Rundle, Mini-Project #17 - "Student Attrition in the College System."

Table 3.1
Attrition Rates by Division and Duration of Program
Fall, 1982, Entry Cohort

	1 Year Programs	2 Year Programs	3 Year Programs	Total
Applied Arts	35.1	40.6	54.7	43.5
Business	30.4	45.1	47.6	44.4
Health	18.4	22.7	22.9	21.8
Technology	23.6	46.1	46.6	45.6
Total	26.8	42.8	44.0	41.7

Source: Ontario College Information System

While neither the Stoll and Scarff study nor the Rundle study assessed the causes of attrition, the ACAATO survey (1988) of student retention cited academic unpreparedness of students as a major factor contributing to attrition. Dietsche's study of attrition at Humber College,[63] not only considered attrition rates, but also analyzed the causes of attrition. Dietsche's data on attrition rates support the findings of the other two studies and further breaks the 1986 fall entry cohort into categories, the four major ones being: successful persisters, unsuccessful persisters, successful dropouts and unsuccessful dropouts. Dietsche's study indicates that attrition cannot be equated with academic unpreparedness for two reasons: first, because academic unpreparedness can be associated with two unsuccessful groups (the unsuccessful persisters and the unsuccessful dropouts) and, second, because the successful dropouts leave college for other reasons. Academic unpreparedness was, however, a problem for at least 14.7% of the 1986 cohort at one college, while another 4.5% of the cohort that dropped out were among the successful group.[64] Dietsche's findings suggest that students may be underprepared in two ways: academically and in terms of making informed choices about careers and post-secondary education. Retention strategies therefore must address the different needs of these two groups.

According to Dietsche, the successful persisters and the successful dropout cannot be separately identified in terms of academic ability or academic preparedness. The factors which promoted persistence "were a product of the interaction between the student and the institution, rather than simply the background and entry-level characteristics of the students themselves."[65] For the successful dropouts, Dietsche claims, it is possible that the characteristics of the institution played a more important role in their leaving.[66]

Dietsche concluded that academic integration and educational commitment (determination to attain a post-secondary education) are of greater importance in predicting or determining the difference between those who drop out and those who persist than are social integration and/or institutional commitment (loyalty to a particular institution). Thus, he said, "the characteristics of the academic environment in commuter colleges are of greater importance in promoting persistence than those of the social environment."[67]

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[63] Peter Dietsche, *Describing and Predicting Freshmen Attrition in a College of Applied Arts and Technology of Ontario*, an unpublished Doctoral Thesis, O.I.S.E., University of Toronto, (Toronto, 1988).

[64] Another 18% were undefined dropouts, 1.2% changed to part-time status and 2.7% were "stopouts".

[65] Dietsche, p. 228.

[66] Other less significant factors affecting attrition reported by Dietsche are poor study habits, socio-economic factors, motivation, finances, institutional characteristics such as "quality", "public vs. private institutions" and "small vs. large schools".

Dietsche recommended the following eight retention strategies:

1. Exit interviews;
2. Active vocational counselling;
3. Group testing, counselling, and orientation programs;
4. Individual counselling;
5. Student peer counselling and tutoring;
6. College readiness programs;
7. Basic skills approach;
8. Orientation programs based on Tinto's model of retention.[68]

Dietsche noted that strategies two through seven were part of an experiment which found that all of the retention efforts showed higher re-enrolment in the experimental groups in comparison with the control groups.

Considering that academic integration and educational commitment are of greater importance in predicting or determining the difference between those who drop out and those who persist than are social integration and/or institutional commitment, it would suggest that colleges need to look at their ability to provide a "climate" conducive to academic integration and educational commitment. Dietsche reports that "cultures" within the climate consist, in part, of the prevailing technologies, administrative organization, degree requirements, curricula, methods of instruction, work loads and extracurricular activities. As well, the culture includes the common values, expectations, standards, assumptions, traditions, general atmosphere and behaviour patterns of the people involved.

"There are two views," Dietsche says, "on how this culture should be managed. The traditional view is that organizational managers need only provide adequate facilities, faculties, programs, and services, and that the student should use this environment for the purpose of 'getting an education.'" In this formulation, the institution provides opportunity and it is up to the students to avail themselves of this opportunity. This might be termed the "passive" mode of educational management.

A more recent formulation stimulated by the work of Pace, is that the managers of the institution have the responsibility to lead and motivate students actively, not merely to passively offer an environment that students may take or leave. An institution managed in this way comes to have more than a few cultures. Ideally, each student should come to experience a learning environment tailored to his or her unique set of characteristics, needs and preferences. The benefits of such an organizational framework would be an increase in the variety of students who are likely to persist and succeed, and, for those who subscribe to outcome measures of quality, an increase in the effectiveness of the institution."[69] Dietsche maintains that such an environment be seen as a system, which can be analyzed and managed to achieve its stated goals.

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[67] Dietsche, p. iii.

[68] Dietsche, pp. 53-58.

[69] Dietsche, pp. 233-234. See Dietsche pages 234-248 for a detailed discussion of structuring such an environment.

This would further suggest that human resource development would play an important role in allowing the faculty and management providers to be more knowledgeable about the systems and environments which are most conducive to success. This point was also raised by some of the interviewees who are responsible for human resource development in the colleges. This will be the focus in section 3.8 below.

We must also raise the question about whether all students go to college to attain a diploma. It was suggested by one of the interviewees that, especially with older adults, they come to the college looking for specific "bits and pieces" that are necessary to them for particular jobs. They may not be interested in diplomas or even programs. It must also be kept in mind that for some young people who enter college, leaving college may be a positive experience in that they may have had little idea of what their career goals were in the first place and in trying college, they may have discovered something about their interests and career orientation thus directing them to another college or university, giving themselves "time-out" to explore other interests or jobs, or that they didn't want to pursue a post-secondary education. For both these groups, colleges may need to offer a more flexible arrangement of individual courses, such as the continuing education offerings at most high schools, and more career counselling.

Academic unpreparedness is clearly one of the reasons students are unsuccessful in college. Scores on entrance tests is one indicator of academic unpreparedness. The Southam News study, *Literacy in Canada: "A Research Report"* (1987), concluded that overall one in six working Canadians is functionally illiterate and 17% of high school graduates are functionally illiterate. While there hasn't been a systematic study of literacy levels of entrants to college post-secondary programs, colleges have indicated that a "not insignificant number of entrants have less than adequate literacy skills."[70] This position may be put into perspective by analyzing reading score data collected by the colleges.

In response to a Study Team 5 request for information about remedial programs and data on entrance tests scores, five colleges replied and four sent data on reading test scores (the fifth doesn't conduct entry tests). Tables 3.2, 3.3 and 3.4 report the reading levels of students who have entered full-time post-secondary programs for the years indicated in three CAATs.

Table 3.2
Reading levels for CAAT "A" Freshmen

Grade Equivalents	% of students					
College (+)	40.6	40.3	43.0	41.0	41.3	40.5
12.0 - 12.9	8.2	8.3	9.1	7.5	8.2	8.3
11.0 - 11.9	13.8	14.3	13.7	14.4	14.6	14.3
10.0 - 10.9	16.0	17.3	17.7	16.4	16.5	16.4
9.0 - 9.9	7.6	6.9	5.7	7.7	6.9	6.9
0.0 - 8.9	13.8	12.9	10.8	13.0	12.5	13.6
	1981	1982	1983	1984	1985	1986

For college "A," the range of percentages of students reading at or above the college level is from a low of 40.3% to a high of 41.3% for the six year period. The range of those reading below college level is from

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[70] Vision 2000 Study Team 1, Project #28 Highlights, "Literacy and the Colleges," (Toronto, 1989).

57% to 59.7%. The range of those reading below grade 10, the level at which remedial programming is required at that college is between 16.5% and 21.4%. However, while percentage figures show a relative consistency, the college indicates that actual numbers of remedial-level students have increased (from 488 in 1981 to 567 in 1987).

Table 3.3
Reading Levels for CAAT "B" Freshmen

Grade Equivalents	% of students					
College (+)	...	...	...	36.1	38.6	39.0
12.0 - 12.9	...	...	...	9.3	11.0	10.1
11.0 - 11.9	...	...	...	10.3	10.5	11.4
10.0 - 10.9	...	...	...	8.5	9.5	9.6
9.0 - 9.9	...	...	...	8.4	8.7	8.7
0.0 - 8.9	...	...	...	27.2	21.6	21.1
	1981	1982	1983	1984	1985	1986

For college "B," the range of percentage of students reading at or above the college level for a three year period is between 36.1% and 39%, slightly lower than for college "A," while the range of the percentages reading below college level is from 61% to 63.9%. The range of those reading below grade 10 is between 29.8% and 35.6%, considerably higher than college "A." Students in this college are placed in remedial language programs on the basis of a writing sample, not their reading scores, although it is noted that the mean grade point average of poor readers is lower than for good readers. For the 1986 cohort, mean Grade Point Averages at the end of the first semester for those reading below grade 10 were 58.8% compared with 66.2% for those reading at college level. The mean GPA for those reading below grade 7 was 54.5%.

Table 3.4
Reading Levels for CAAT "C" Freshmen

Grade Equivalents	% of students					
College (+)	30.7	19.0	20.6	16.8	29.8	26.6
10.6 - 13.4	36.1	49.8	45.4	47.9	47.6	48.2
0.0 - 10.5	33.0	30.7	34.1	35.3	22.6	25.2
	1981	1982	1983	1984	1985	1986

In college "C" the percentage range for students reading above 13.5 is between 16.8% and 30.7% in a six year span, figures considerably below either college "A" or "B." Those students reading below the college level range between 69.1% and 83.2%. The range of percentages of students reading below grade 10.5, and requiring remedial assistance at this college, is between 22.6% and 35.3%, considerably higher than for college "A" but quite similar to college "B." College "C" has also reported average reading results by division and for the total college. Table 3.5 shows these results.

Table 3.5
Average Reading Test Results for CAAT "C"

Year	Applied Arts	Business 2yr	Business 3yr	Technology 2yr	Technology 3yr	Health Sciences	Total College
1981	12.1	12.6	11.4	11.1	11.9	12.7	12.0
1982	12.4	12.2	11.7	12.5	12.0	13.0	12.1
1983	12.2	12.1	11.4	11.7	11.6	12.7	12.1
1984	12.1	12.6	11.4	12.5	11.3	12.6	12.1
1985	13.1	12.4	....	12.2	....	*	12.7
1986	12.8	12.4	....	12.6	....		12.7
1987	12.8	13.1	12.2	13.0	12.7		12.8

*Health Sciences was merged with Applied Arts in 1985.

Although there is slight variation between divisions, for these seven years the average of the reading levels for the total college has remained relatively constant, and the trend actually shows a slight increase in reading ability. Indeed, there has been no statistically significant change reported in the reading ability of incoming students at this college for the past twenty years. The conclusion of the Chair of the Communications and Academic Studies Division is that "the crisis in literacy that we read about almost daily in the newspapers is largely illusory."[71]

On the basis of the reading scores reported from these three colleges, between 16.5% and 35.6% of the students in full-time post-secondary programs are reading below grade 10 level. These figures have remained relatively constant for from three to twenty years. Although reading scores are not an accurate indicator of actual or potential reading skills, it is safe to assume that between approximately 20% and 35% of students will have some difficulty comprehending text material in their courses, possibly contributing to their being unsuccessful in college. Some communication specialists recommend all students entering colleges be tested in reading, and there should be a mandatory reading and study skills courses for students reading at or below the grade 9 or 10 level.

Of particular importance to note is that, especially in Metro colleges, the number of non-English speakers requiring ESL programs is increasing. One Metro college that offers ESL to its students has recorded the statistics in Table 3.6.

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[71] Letter from the Chair, Communications and Academic Studies Division to the Vision 2000 researcher, 29 June 1989.

Table 3.6
Outcomes for CAAT "D" Freshmen#

Course Fate (grade equivalent)	% of students					
Exempt (grade 13+)	...	...	...	1.6	0.6	0.9
College Eng.(1)* (grade 9 -)	77.7	79.7	74.3	67.2	67.2	63.7
College Eng.(2)** (grade 7 - 9)	...	17.1	21.8	25.5	29.2	29.0
ESL (below grade 7)	2.0	3.3	3.9	5.7	2.8	6.4
	1983	1984	1985	1986	1987	1988

# Outcomes for students are based on both reading and writing scores; writing is scored from 1 to 4; some students reading above grade 9 may be required to take English (2) if their writing scores are low.
* English (1) is a one semester course
** English (2) is a two semester course

Over this six year period the percentage of students requiring ESL programming in this Toronto college has increased from 2% to 6.4%. In actual numbers, this represents an increase from 42 students in 1983 to 170 students in 1988. Given that immigration patterns have changed drastically in the past two decades and an increasingly smaller percentage come from English-speaking countries,[72] we can expect this trend in the demand for ESL courses to continue in the central region colleges.

Dietsche noted that some studies reported that student self-assessments of their reading, writing and vocabulary skills differed significantly between persisters and dropouts, indicating that such measures might be a viable alternative to the rather cumbersome administration of standardized tests.[73]

In terms of retention related to student preparedness, clearly two key approaches must be considered: creating educational environments which support student success and providing remedial assistance for those who need it. Dietsche has made some recommendations with regard to developing supportive systems and section 3.9 below explores 'readiness' or remedial programs. In both cases the question is how best to operationalize their delivery.

3.8 Human Resource Development Strategies for Student Success

Human resource development has been identified by many as an essential key to student success. However, this is not universally recognized. Peter Dietsche noted that "most administrators assume that the principle factors promoting student failure are associated with the student, not the institution." Some administrators and teachers maintain that students who do not succeed simply "do not have what it takes" to be successful.[74] The first stage in the development process may be identifying and defining the roles of personnel in both the secondary sector and the college sector in terms of student success.

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[72] In 1967, 90% of immigrants to Ontario came from Europe and the United States; in 1987 this percentage had fallen to 30% while immigrants from Asia and South and Central America accounted for more than 60% of our immigrants.

[73] Dietsche, p. 32.

Human resource development for secondary personnel

Transition and retention have been identified as serious problems for secondary schools and colleges. In its effort to address those problems, the Ministry of Education has identified teacher education as one of several fundamental components needing attention.

In a Vision 2000 interview, a senior Ministry of Education official was asked about the pre-service and in-service training of secondary teachers and the Ministry's plans for action. He responded

> ...we have just been through the teacher education review process and have just set up the Teacher Education Council and those [pre-service and in-service training] are the two first items on its agenda. We'll start meeting in September [1989] ... In the province at the moment there is, of course, huge participation in the in-service training program. One-fifth of all the teachers participate every year in some sort of formal, recognized, in-service training apart from p.d. days... But there is a real question about whether or not we've got it right, whether the design of the system is right, whether the courses they are taking are the most productive, etc. And so, we haven't got a plan yet. That's just the two items on the Council's agenda and that's what they will be asked to deal with next year, the next school year.

One recent initiative has been the transfer of responsibility for teacher education from the Ministry of Colleges and Universities to the Ministry of Education. Another has been the Ministry's focus on the guidance function. This year the Ministry sponsored a series of two-day institutes across the province for teachers, principals and guidance counsellors. Ten institutes were held for each of the groups; in all, 350 teachers, 350 principals and 350 "heads of guidance departments" took part in the institutes. One institute was exclusively for members of the Metro Co-ordinators of Guidance Association, a group of guidance personnel representing 60,000 students and responsible for development of in-service programs and publications for guidance counsellors in south-central Ontario. The institutes highlighted student transition and retention strategies and ways programming and resources for students can be improved. Each institute consisted of a pre-session package of reading materials which included a booklet of retention and transition project models in Ontario, information workshops and a facilitated session on "the guidance function in the year 2000." Specific to the colleges was a discussion around effective staff liaison and improving the flow of information to students.

Other Ministry initiatives with respect to the guidance function are discussed in section 4. Since the Ministry has targeted guidance, many other initiatives, especially around human resource development, have been begun, some of which are also described in section 4.

Human resource development is not limited to teacher education; it is set in the context of change and, therefore, communication about and participation in change are also essential. As one interviewee said, "The process has started ... We have a long way to go, too. ... There are many important things that have to be done in the next decade and we have only just started."

Human resource development for college personnel

In December, 1987 the Executive of the Committee of Presidents (college) endorsed the concept of Human Resource Development in the Third Decade. Since then a task force was convened with a mandate to examine the values held by the college system for the development of all personnel, to determine the effectiveness of existing human resource practices and to make recommendations for possible future directions. The Task Force's "Blueprint Proposal" containing 36 recommendations was unequivocally accepted by the Committee of Presidents early in 1989 and funds have been pledged to implement the recommendations.

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[74] Dietsche, p. 243.

The recommendations fall into the following six categories:

- Policy and Planning
- Structure
- Funding
- Programs
- Linkages
- Future Directions

Binding these recommendations together is the belief that "... there is a direct correlation between the quality of student success and the commitment of financial resources to the development of skills and knowledge of college personnel."[75]

While the Task Force's recommendations are all encompassing and will soon be implemented, three issues require further consideration with regard to the college mandate: 1) the need to identify and define roles of all college personnel in terms of student success, 2) the need to provide pre-service and in-service training specifically focussing on the responsibilities of college personnel, and 3) the need to ensure funding for professional development.

In the context of the discussion of access, competence, and student success, it becomes clear that all necessitate guidance and support services. These services are not universally available in the colleges and the roles of neither guidance counsellors nor teaching personnel are defined in terms of student success. For example, the counsellor's role could include any of the following: orientation, career planning, program planning, assisting with personal problems, supervising tutoring, developing retention strategies, testing, liaising or professional development. Presently the role of the counsellor is different at each college and the role changes in relation to budgetary allowances and the perception of need by the senior administrators in charge of designating student services. In the past, student services included mostly personal and program counselling. More recently, counsellors have been involved with orientation programs. This, as it was noted in a Vision 2000 interview, is at a time, ironically, when students have more problems with drugs, when there are more single parents and problems associated with mid-life changes, more unemployed people and break downs, and more burnout. It has also been pointed out that students, even when they are conscious of their needs, which they sometimes aren't, are often not aware that the college offers support services. Students, even if they are aware of their needs and the presence of support services, are sometimes reluctant to request help.

Teachers are also at a loss when it comes to the counselling of students. As one interviewee put it, "When does the faculty lend support to the student and counsel the student and when does that faculty redirect that student to the counsellor? How clear is it in the eyes of faculty just what their role is?" Some faculty may have the skills and may get very involved, while other faculty may not have the skills or feel inclined to get involved. Clear guidelines for the teacher's role, which may include program counselling, and professional development around how to respond to student's questions and needs is likely to benefit students, teachers and counsellors.

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[75] The Task Force, *A Blueprint Proposal for Human Resource Development in the Third Decade of the Ontario Colleges of Applied Arts and Technology*, (Toronto, 1989), p. 17.

Many administrators in the college system today were hired over the years as teachers for their expertise and their content specialty. Few had previous teaching or administrative training. Administrators need to develop and refine managerial and academic leadership skills. As well, the role of the administrator, including the identification of administrative responsibilities, requires clarification.

A shortage of teacher education courses and programs for college instructors exists in Ontario. While teacher training is available in many centres throughout the province, courses and programs designed to meet the specific needs of college personnel are not offered by Ontario universities. Central Michigan University's two-year masters program for college faculty, offered on the campuses of some Ontario colleges, is proliferating and has a waiting list of applicants. There is an obvious need for this service.

Pre-service and in-service training for college personnel is a relatively recent development. It is not yet available to all personnel within colleges nor are the programs that are offered of equivalent quality. Although the roles of administrators, teachers, counsellors and support staff are different, it is the responsibility of all personnel to understand and assist in the process of student success and all require ongoing professional development. The College Committee on Human Resource Development identified a need for a leadership training program for all college personnel similar to ERMADEP, the Eastern Region Management Development Program. They suggested that in-service need not be exactly the same for every region, but it should have the following five characteristics:

1) a residential component or series of residential components;
2) a sequential program of one to two years;
3) a co-operative effort within the regions so that there can be an inter/intra college support system;
4) an inter-college support program, which continues to increase skills, that can be anything from a series of lectures or seminars to workshops; and
5) it should be mandatory.

The Committee noted that ERMADEP has been well received but it can accommodate only a small number of people each year. The northern and western regions are considering developing similar programs. To assure the permanence of the training programs, support by senior academic officers must be obtained and trained facilitators to work in the programs must be available.

Funding for human resource development has been identified as a serious problem. Presently funding for professional development is allocated out of college general operating revenues. There are some serious limitations associated with this arrangement, as the following passage from the Vision 2000 Study Team 1 Project #19 Highlight points out.

> In times of financial constraint, college administrators are often faced with the decision of choosing between staff-layoffs and reductions in staff development and equipment expenditures. The natural and quite laudable tendency is for administrators to attempt to minimize lay-offs at the expense of expenditures on staff development and equipment. While such behaviour may minimize the impact of financial restraint on staff morale and accessibility, it may also, in net terms, adversely

> affect the quality of training being provided, particularly if colleges face prolonged periods of restraint.[76]

Another drawback to this arrangement is that administrators who do not recognize the need for human resource development, or who think it should be the responsibility of the individual teacher, do not allocate funds for it.

William Davis set out a framework for human resource development in the colleges in "Some Unique Features." Once again, reality has proven different from the plan. Davis wrote:

> A new concept of teacher education, grounded in socio-economic principles and on the experience that will, hopefully, constitute a main strength in the college teacher, will be introduced. The preferred program is one of a pre-service orientation period followed by two years of in-service training.
>
> During the in-service period, each group of teachers will perform regular teaching duties under a special counsellor with master teaching qualifications whose function is to advise rather than to assess. In this period, also, special courses in various important aspects of the educational process will be scheduled.[77]

Considering the magnitude of the issues surrounding human resource development, is the Committee of President's commitment to implement the Task Force's recommendations enough to guarantee system-wide human resource development and ongoing funding? Does the recent transfer of the responsibility for teacher training from the Ministry of Colleges and Universities to the Ministry of Education mean that teacher training in Ontario will be more "school oriented"? What mechanism is needed to ensure that the provision of teacher education in Ontario also means the provision of "college teacher education"? The disparity between the current state of affairs, although changing, and Davis's blueprint for professional development also raises the question of whether a formal policy regarding professional development in the colleges should be mandated.

3.9 College 'Readiness' Programs

Another step in assuring student success is in the provision of remedial programs for those who need assistance. A comprehensive study of student support services, the adequacy or the effectiveness of them has not yet been done. Vision 2000 Study Team 1 is slated to report on the "Nature and Extent of College Student Services" and "Shortcomings and Barriers of Student Services" in September, 1989.

Of the five colleges who replied to Study Team 5's request for information about their preparatory and remedial programs, one college makes Reading Clinic mandatory for all students reading below the grade 10 level; reading levels of all incoming freshmen have been tested since at least 1980.

One college provides remediation for six hours a day through tutorial assistance for mathematics, language and study skills in a Learning Centre. Remediation is also provided in a study skills course;

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[76] Vision 2000, Study Team 1, Project #19 Highlights, "College Expenditure Patterns, 1978-79 to 1986-87," (Toronto, 1989).

[77] *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology," pp. 35-36.

English and math upgrading can be accessed through a college exploration program. This college does not test reading levels.

One college, which has been testing reading levels for the past 20 years for approximately 75% of incoming freshmen (the other 25% are exempted due to advanced standing credit) and presently also tests writing, assigns students to one of two groups: they are either exempted from English 100 (those who get a score better than 80% on two writing samples) or they take English 100. No remedial assistance for the 22.8% reading below the grade 10.5 level was mentioned.

Another college, although reading tests are administered to all freshmen, places students in one of two English composition courses for freshmen based on a writing sample. No remedial assistance is offered to the 40% of students reading at or below the grade 10 level or the 20% of students reading at or below the grade 7 level, except for the General Arts and Science students at one campus who can take one reading course. A "Drop-in Centre" is available from 9 A.M. to 4 P.M. daily to help students who have either been referred by instructors or who voluntarily seek assistance in writing or math.

One of the five colleges, which has tested reading and writing levels for all incoming freshmen since 1982, places students in one of four groups. Students reading below the grade 7 level and with few writing skills are placed in a non-credit ESL program which meets 8 hours a week and have their course load reduced by one subject. Students who are either reading between grades 7 and 9 or who have poor writing skills are placed in a two semester English course for which they receive one English credit at the end of the second semester. Students who are reading above a grade 9 level with average writing skills are placed in a one semester college English course and students reading at the college level and who have strong writing skills are exempted from first semester English.

From the information provided by the colleges there is no way to assess whether existing programs are either adequate or effective. It is obvious, however, that there is no consistent provision of remedial assistance in the province although the need for assistance by from 20% to 35% of college students, based on reading scores of four colleges, has been consistent over a number of years.

In "Some Unique Features," Davis stated that "upgrading programs must be introduced at and for all levels." He recommended that

> the "systems" approach to ungraded education might be followed here as well as in the regular College programs: from Grade 10 or lower to Grade 12; from the Grade 12 level of the Four-Year Programs to that of the Five-Year Programs; English language programs for non-English-speaking new Canadians and for French-speaking Canadians in areas where instruction in French is, for various reasons, not feasible; specialty courses to meet the specific requirements of a college program.[78]

Once again there is a disparity between what was envisaged and what has taken place. We must now ask what kinds of readiness or remedial programs are needed and by whom? Who should be responsible for organizing and implementing such programs? Should they be part of the guidance function, divisional jurisdiction or should there be a separate division for upgrading and remediation? Should these services be offered by all colleges and should there be consistency throughout the province? Of significant importance is the funding of these courses or programs. This will be considered in section 3.10 below.

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[78] *Basic Documents*, "Some Unique Features of Colleges of Applied Arts and Technology," pp. 36-37.

3.10 Funding Implications of Readiness Programs

Presently, preparatory and remedial courses and programs are not funded directly by the Ministry of Colleges and Universities. If a college elects to provide such courses, it must do so out of general operating revenues, that is, funds must be diverted from regular programs and services in order to cover preparatory and remedial courses. The cost of providing these courses could be considered an investment in quality, access, efficiency and retention, however, it is an investment which many colleges feel they cannot bear under current funding arrangements.

The Vision 2000 environmental scan estimates that 100 hours of intensive learning are required to raise an individual's literacy level by one grade.[79] If we assume that 20% (the actual figure may be as low as 16% or as high as 40%) of freshmen are between one and three years below the minimum reading grade level for which they can benefit from college programming,[80] and it can also be assumed that some students will also be weak in writing and numerical skills, students may require a minimum of between 2,000,000 and 6,000,000 hours of remedial programming.

The following funding estimates take into consideration that a minimum of 20,000 students require 4 hours of remediation per week; that represents 80,000 SCH (student contact hours) per week. With 15 students in each class, with 16 hours of classes per week, the full-time faculty equivalent is 240 TCH (teacher contact hours). 80,000 SCH/ 240 tch = 333 FTE (full-time equivalent) faculty. The average cost per instructor, at $45,000 plus 12.5 % benefits, is $50,625 per annum. 333 FTE X $50,625 = $16,858,125 per year or approximately $8.4 million per semester for the entire system. At an average of 15 FTE per college, the cost for each college would be approximately $381,818. Actual FTE figures would be greater for large colleges and less for small colleges, and it is also likely that the need would be greater in Metro colleges than in other districts where non-English speaking immigrant populations are smaller.

Most students would require two terms of remedial assistance, although some would require as many as six terms. This could be accomplished by providing more than 4 hours of remedial classes per week to those students. Costs, then, would be proportionately greater. It follows that if colleges open access to a greater cross-section of the population, costs for remediation will increase. If, on the other hand, revisions to *OS:IS* and articulation agreements help to better prepare students for college, the need for remediation will decrease.

One college followed the outcome of students who were reading below the 10.5 level and determined that approximately 50% of them dropped out before graduation and another 11% persisted at the college, but were ineligible for graduation. If the minimum 20% represents students at risk of dropping out, the actual cost to the colleges due to attrition may be considerably higher than providing remedial classes.[81]

The costs of remedial preparation can be looked at from another perspective, as Graham Collins noted in "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action." Collins wrote,

> Additional education increases an individual's ability to contribute to production and his/her earnings, increased education in terms of time spent in school has made a major contribution over time to economic growth and education directly benefits individual welfare and thus investment in

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[79] Ontario Council of Regents, *With the Future in Mind: An Environmental Scan*, p. 65.

[80] The Scan reports that 98% of jobs require reading; 2 hours per day at the grade 10 level or higher is common.

[81] Peter Dietsche estimated costs related to attrition to be $7.2 million at Humber College alone (p. 221).

> education not only improves the individual's ability to participate in social decisions, but is linked to growth of provincial income.[82]

This broader perspective was pointed out in Vision 2000 Study Team 4's discussion paper, "Pressures for Change, Opportunities for Development", which stated,

> It may be argued that such an investment, once made, will yield significant economic returns over a considerable time at both the individual and social level. This is particularly true given the likelihood that recurring and periodic training will be necessary for most people during the course of their working lives. The cost to business of the literacy problems of current employees is difficult to calculate, but is understood to be, annually, in the billions of dollars (according to the Canadian Business Task Force on Literacy). It would not be difficult to argue that for both social and economic reasons, such an investment might be deemed efficient.[83]

With respect to the funding arrangements of MCU, colleges argue that current funding is not adequate to provide remedial courses for students experiencing difficulty with writing, reading and mathematics or to allow colleges to maintain accessibility for students who do not have minimal basic skills. MCU has argued that they and the public should not be responsible for the costs associated with remediation, costs which they argue should have been borne by the elementary and secondary systems. But can the colleges hope to support an open-door-policy with present funding allowances? Is it sufficient for colleges to continue to allocate funds from general operating revenues for remedial services, possibly putting their existence into jeopardy when administrators are faced with financial restraint? Should remedial services be funded separately, with a formal audit, so that the provision of services will be guaranteed and other programs won't be put at risk?

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[82] Collins, "Ontario's Colleges of Applied Arts and Technology in the 1990s: An Agenda for Action," p. 9.

[83] Norm Rowen, "Pressures for Change, Opportunities for Development," Vision 2000 Study Team 4, 1989, p. 13.

Section 4: Relationships and Potential Links Between Schools and Colleges

Introduction

When the colleges opened in 1967, their mandate and governance structure suggested that there ought to be a collaborative relationship between the secondary schools and the colleges. However, the colleges were more concerned with start-up issues and the 60s were times which brandished competition. The colleges didn't escape; they were fiercely individualistic and autonomy was the managerial watchword.

With greater maturity in the late 1980s, along with declining enrolments in secondary schools and colleges, increasing budgetary constraints, recognition of higher than desirable dropout rates and a growing social sense that competition may be detrimental to the integrity of institutions and possibly to systems as a whole, the schools and colleges are finally coming toward each other to discuss educational issues of concern to each and, in some cases, are finding new solutions to old problems through co-operation and collaborative ventures.

This is not to suggest that colleges and school boards have not had good relationships in the past. Some have had very good relationships but, for the most part, they have tended to ignore one another. As one interviewee put it, "Mostly they don't pay any attention to each other. They know about each other, I'm sure they think about each other. They don't do much relative to each other."

Schools and colleges are now treading gingerly on new turf; they are trying novel and innovative schemes. Communication channels haven't yet been established to broadcast what is being done. Word is slowly getting out that something is at hand. Innovators are still reticent to proclaim success. They are optimistic, though, and the time and energy seem right to begin to work on the relationships that somehow couldn't have been achieved when the colleges were born.

One person interviewed said, "I think the real challenge hasn't got to do with central authority or regional authority or anything like that. The real challenge has to do with the relationship between the colleges and the work world and the other parts of the education system. I think that's where the real payoff is." Another interviewee added, "The more boards and guidance counsellors and teachers have a sense of what colleges are, what programs exist and the more colleges have a sense of what is going on in the secondary school system, the better for everybody."

4.1 The Need for Collaborative Relationships Between Schools and Colleges

As noted in section 1, none of the interviewees who responded to the question about a possible need for continued competition answered affirmatively; they all said education cannot be seen as having competitive elements. Several major reasons were cited for the need for collaborative relationships; these include financial constraints, the need to support lifelong learning, and the need for better information exchange. As well, some areas were identified as those which could benefit from joint mandates.

Ever escalating costs have made the outfitting and up-dating of high tech labs in both secondary schools and colleges a heavy drain on tax dollars. Especially in remote areas, it is not feasible for the government to furnish two similar labs, one for the secondary school and another for the college. It is even less possible to install facilities for different technologies in each institution. It is likely that even in larger centres it would be cost effective for schools and colleges to share highly specialized facilities. Collaboration in the use of facilities could alleviate the problem of the lack of access to diverse educational experience faced by many secondary school students. Financial constraints also make the sharing of faculty, sharing the costs of human resource development, and sharing the responsibility for career development a necessity.

Although the Ministry of Colleges and Universities and the Ministry of Education profess to support the concept of lifelong learning, the infrastructure for it doesn't yet exist. Education in Ontario is still primarily the education of the young. That is, the education of the adult is still a peripheral interest for all educational institutions. Lifelong learning, however, is needed for two reasons: for enrichment and because we are moving toward a different occupational future. Continuing education will play an increasingly important role in everyone's life in the future. In order to support lifelong learning, the educational system must work toward removing presently existing barriers. Articulation and other shared ventures can add to a sense of continuity and collaborated effort for both students and teachers. Articulation agreements facilitate retention of secondary students because students are assisted in developing realistic goals and understanding the rationale for the courses they take. Articulation may also suspend attrition of college students because they will be able to make more informed choices about careers and colleges.

Lack of information about counter-institutions is a major obstacle in developing compatible curricula. Faculty and staff must know about programs in other institutions in order to remove barriers and reduce gaps and overlaps. Articulation and other collaborative efforts carry with them the potential to keep college faculty and high school staff informed about changes in curriculum in the two institutions. By working collaboratively, secondary school staff and college faculty can make sure the basic skills students need in order to succeed in college and in their chosen careers are available to them. Greater creativity arising from the synergistic effects of sharing can be a bonus above and beyond possible economic savings.

Human resource development is an ongoing requirement in all educational institutions. To meet some of those needs more efficiently and effectively school boards and colleges can collaboratively develop new and expand old in-service programs. Teachers of both secondary schools and colleges, through dialogue, can share information on new developments in their fields and in teaching techniques. Other initiatives, such as jointly sponsored workshops or teacher exchanges, may also address human development needs in both institutions.

4.2 Areas Which Could Benefit from Joint Mandates

As noted above, there are several good reasons for schools and colleges to develop more collaborative relationships. Curriculum, career counselling, faculty, facility, and human resource development, as described below, are areas which would immediately and directly benefit from joint mandates. Section 4.4 reports some innovative relationships that have appeared in Ontario in the past few years. The list is long but not exhaustive; other exemplary practices already exist and more are left to the creative imagination. Articulation has been endorsed by many as a vital method for linking secondary schools and colleges. People involved in articulation agreements have discovered that many unanticipated benefits grow out of working together. Sections 4.5 and 4.6 report on existing articulation models and address some of the governance implications of articulation agreements.

Curriculum

The shift in emphasis now being recommended for secondary education, away from specific vocational skills development and toward generic skills development, will likely have significant implications for colleges. Either colleges will follow suit by recognizing an increased need to provide more general education as the basis for job mobility as well as a requirement of high tech and service jobs, or it may be considered that secondary school curriculum provides an adequate general foundation and therefore colleges may focus even more intensely on vocational training. In any case, it is likely that if the secondary mandate moves away from job preparation in the sense of specialized vocational training, then college programs and entry requirements will have to be realigned. Students wishing to prepare themselves for skilled jobs may turn in greater numbers to the colleges for training previously offered in secondary schools. Not only could curriculum benefit from joint mandates, but it appears that there must be some degree of collaboration if the two systems are not to move in conflicting directions and create a situation in which students are even less prepared for college and the workforce.

A joint mandate for curriculum, as pointed out by the participants in one of the Ontario articulation projects, gives greater assurance that students will have the necessary prerequisite skills for more advanced courses. A joint mandate may also create a forum for the analysis of course content to insure that all material is pertinent to essential completion competencies. A three-way linkage connecting secondary curriculum, college curriculum and workplace needs may also be beneficial. Several boards and colleges have successfully integrated their curricula, use of faculty and facilities.

Career counselling

Career counselling has been identified as an area of critical importance that has perhaps not received the attention that it requires. The new Inter-Ministerial Committee has targeted information exchange, which taken broadly is the guidance function, as one of its top five educational issues. A Ministry of Education official commenting on this said, "there is a lot of work to be done in that area."[84]

The Ministry of Education has already begun to change its perspective relative to the role of the guidance counsellor. A Ministry spokesperson said,

> I think that we have to move to a notion about guidance that makes the guidance counsellor somebody you refer to for very special problems, very specialized information that is needed, or very specialized help. And that all adults working for the school system have to be turned into guidance workers. So that in the normal course of events your interaction with an adult in the system is at least partly a guidance interaction. So that teachers will have to take it up as a major function. ... It's going to take time. It's not going to happen in a hurry. And we really feel that that's what's crucial, that everybody be regarded as part of what it is that they do so that it is not just something you do once in a while. In that regard we are probably going to reinforce arrangements where high school students get at least a few subjects taught by the same person so that they have some continuous experience with somebody ... And that is why we have added nine into that year, the new transition program is going to have 7, 8 and 9.[85]

Guidance counsellors at the secondary level have, in spite of the fact that their role is defined by the Ministry, traditionally had a real problem communicating it to their audience: students, teachers and so on. A spokesperson from the Ontario School Counsellors' Association expressed the following about their position:

> Our role is to help kids be as successful as possible. Our role is to be an advocate on their behalf, to help that happen. ... That role is going to continue to be important, in fact it is going to increase in importance because the direction that the Ministry seems to be moving is to recognize that guidance counsellors are at their best when they can facilitate change and success with kids. That means that we have to be skilled at community relationships, business and industry relationships, college and university relationships, so that we have not only an established relationship with them but we have all the information that we need to be able to share with young people to help them explore career directions. ... So our role is very clearly defined by the Ministry, but as I am

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[84] Vision 2000 interview.

[85] Vision 2000 interview.

> suggesting it is going to shift and change so that our co-ordinating, liaising, facilitating role will become increasingly important.[86]

College representatives also expressed the view that the role of the guidance counsellor is changing and that slowly it is becoming recognized by some administrators that the counsellors have a definite role to play with regard to both student retention and career counselling. Colleges are already involved in the college counselling function of secondary students. However, since a significant number of college students drop out because their career goals are not clear, college counsellors may not as yet be doing as much as is needed when it comes to career counselling. (This is also discussed in section 3 in connection with student success.)

Career counselling has been identified by some educators as an area of shared responsibility. Many innovative programs have been developed in the past few years and are noted below. There is further need for faculty training in this area. There is also a need for students to be more informed about educational institutions and the workplace as well as being more directly involved in their activities. Only through better relationships and collaborated efforts will student exchanges and programs like co-op take place.

Teaching Faculty

Although existing contracts and union affiliations may make the sharing of faculty somewhat difficult, precedents have already been set. Having one well trained person between a secondary school and a college may serve both institutions in areas where there isn't enough demand to have two full-time teachers. With fluctuating enrolments, instructors could move back and forth between secondary school and college without having to face lay-offs or the usual practice of having to teach in areas outside their specialization until the need for that specialization recurs. Joining faculty through shared responsibilities, such as in the SWAP program (described in section 4.4), is another way faculty can work co-operatively. Exchanging faculty is also a way for secondary and college teachers to become knowledgeable about both educational institutions. Some articulation programs in the United States employed one person to co-ordinate both the college and secondary divisions.

Facilities

The sharing of facilities has become a financial necessity; updated labs cannot be provided to all institutions in the province. Greater utilization of existing and newly built facilities is not only cost effective but may also allow more students access to better quality equipment. Where secondary students use college facilities they can be introduced to college courses, faculty and programs. Several schools and colleges are already sharing facilities. One project combines the joint use of faculty and facility: for the past three years, Humber faculty have focussed on teaching vocational skills to adult day students in a lathe operator program using York Board of Education facilities, while the York Board teachers have done the academic upgrading.

Human Resource Development

Facing the information explosion, constantly expanding social demands and rapidly altering approaches to teaching, teachers understandably are having difficulty "keeping up" with change. As previously noted, greater collaboration between institutions can assist in the process of keeping teachers informed about innovations in their fields and in teaching methods. Jointly held workshops and training programs, as well as encouraging teachers to work together on projects such as articulation, help teachers to know one another and share ideas.

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[86] Vision 2000 interview.

4.3 Areas of Continued Competition Between Schools and Colleges

It was repeatedly expressed in the interviews that, although colleges and secondary schools, as well as private agencies, federally sponsored programs and labour, provide basic literacy, continuing education and ESL services, the needs are so great in this area that provision of these services by many agencies is not a matter of competition but one of providing necessary diversity. Some thought that greater co-ordination of effort should exist but that too much regulation could threaten existing diversity. Duplication was not considered a problem at this time, or for the foreseeable future, since need far outstrips the ability of agencies to provide services. There is difficulty, however, in the dissemination of information about existing services in large urban areas.

As stated above, there don't seem to be any areas where it is thought competition should continue between schools and colleges. However, it was ardently and explicitly pointed out that competition still exists in and among the colleges. And it was equally clear that, in the opinions of at least two of the people interviewed, this needs to be altered. In the context of discussing collaboration and competition, two interviewees shared the following:

> Interviewee A: Our success was based on little skunk works, to use one of those management terms. We were quite successful; little groups all working away competing with each other, even within their own college. But now the biologist in me says you've got to have the integrative model. Because you can't operate when you have a bad headache, your whole system shuts down because you are just one. And I think that's what we have to do now. We must recognize that we have to integrate.
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> Interviewee B: I think that the decision makers, the people who are in the positions of influence, are going to have difficulty adjusting to a paradigm which is rapidly changing. If you look around at what's going on in business now in terms of the rate of change... And if you look at what's happening in college education, we are getting further and further away from that capability [to work collaboratively] because we just don't have the flexibility. And that's a combination of managerial skill, it's a combination of philosophic orientation, it's a combination of increasingly bureaucratic collective agreements. ... So if you look and you contrast places like British Columbia where the government basically has said, "Hey, it's time we got away from this old model of all the institutions doing their own thing and we're going to set up the open college over there based on the open university..." [Did] you see that example ... about the tourism thing where you've got 20 colleges all being together to really hustle "tourism is a growth area because..." It's not individual colleges all flogging their tourism program, you see. Now the reason that that is critical is because in Ontario every college's mind set is we have to market our tourism program. What British Columbia ... has to say, "Tourism is a growth industry. You looking for a great career? There's gonna be a zillion jobs in tourism by the year 2000. You can go to any of these 12 colleges and they're all listed in the bottom of the ad. Step right up. Buy a course, get one free with our special discount enrolment plan. But come to (us)...to study tourism."
>
> Interviewee A: And you can transfer from college to college. Can I tell you something? [One of the colleges in Ontario] has two tourism programs that compete with one another and don't recognize one another for transfer. You want to know what the problems is? It is easy to sit here and criticize them but... There is so much ingrained individualism...

While it has been resolutely expressed that competition should not exist between secondary schools and the colleges, the fact that it exists among and within the colleges may be a problem when trying to create linkages between the two sectors.

4.4 Some Innovative Relationships

Following is a description of some of the innovative co-operative projects that are presently being undertaken or are under consideration between Ontario secondary schools and colleges.

Co-op

Co-op "is an experiential mode of learning, delivered under Ministry of Education subject guidelines, that integrates academic study and classroom theory with experiences at the worksite. ... It is a partnership among education, business, industry and labour that usually involves students, teachers, parents, employers and employee supervisors."[87]

Co-op began in the late 60s and was recognized for secondary credit beginning in 1977. This year, approximately 45,000 students across the province, mostly at the general level and in the senior division, are participating in co-op programs. While it generally affects students who are in grades 11 and 12, some students in grades 9 and 10 do participate. Students may take as many co-op credits as they wish as long as they meet other qualifications for their diploma.

The process usually begins when a student approaches a guidance counsellor who reviews options and opportunities to work in different areas. The student is then referred to a co-op co-ordinator at their high school who arranges the co-op placement. Co-op varies with school timetables, but is done either on a yearly or a semester basis; the usual model is a half day per week for one year.

There has been some linkage with universities who have taken co-op students on campus. Some groups, like Metro Separate School Board, are negotiating with colleges to have co-op students attend courses. Post-secondary institutions have indicated that co-op is valuable and, with all things being equal, students with co-op experience are given preference for admission. However, advanced standing for co-op has not yet been granted at any of the colleges or universities. Several colleges are now considering such a plan.

A sub-committee on Co-operative Education under the College Committee on Academic Affairs, made up of the 17 colleges which have co-op programs, has been meeting regularly for three years. Georgian is the most active of the colleges involved in co-op and now has over 60% of its students in co-op programs. Georgian is in the process of establishing links with secondary schools in their catchment area to liaise specifically in the co-op area.

SWAP

The School-Workplace Apprenticeship Program (SWAP) is a joint initiative of the Ministry of Education and the Ministry of Skills Development. SWAP was developed in response to a shortage of skilled labour in the Guelph area. After the Wellington Chamber of Commerce's and Guelph area industries' assessment of needs for the next five years indicated that approximately 25 apprentices would be required for each year, a local committee proposal was submitted to the Ministry of Education to have students who had just completed grade 10 enter an apprenticeship program. Traditionally apprenticeships didn't begin until after secondary graduation.

The plan is to have about 30 (to allow for dropouts) promising students with an equivalent of grade 10 enter the program. Students will attend high school on a part-time basis for three years. Two days a week

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[87] Ontario Ministry of Education, "Policies and Procedures for Co-operative Education in Ontario Secondary Schools," (Toronto, 1989), p. 3.

will be spent in the high school and three days in an employment situation with the Ministry of Skills Development supervising the latter. During the three apprenticeship years, students will also attend classes co-ordinated by Conestoga College. The college will be responsible for theory in the apprenticeship area. In some instances, the student will attend classes at the college and for some segments instructors will go to the industrial site. Participating employers must guarantee to employ the students for the full time that they are enroled in SWAP. Students will be working as an apprentice under contract and must therefore be paid according to the Apprenticeship Act regulations. When the student has completed SWAP she/he will receive a secondary diploma and will have completed 2600 hours toward an apprenticeship. The advantage of this program is that it breaks the traditional sequential pattern and now makes apprenticeship programming concurrent with secondary education. Concerns have been expressed, however, around whether these students will receive adequate general education experience considering the vocational bias of the program.

SWAP apprenticeships in Wellington, although initially in manufacturing industries, will not be limited to them in the future. The program was to have started in February, 1989 but is now scheduled to start this September.

TAP, in Tamiskaming, is similar to SWAP although it will only upgrade students to enable them to go into regular apprenticeship programs. It is also scheduled to begin in September, 1989. Eight or nine other apprenticeship proposals have recently been submitted to the Ministry of Education and the Ministry of Skills Development for consideration.

Linkage II

Linkage II, a program described in the 1984 *OS:IS* guidelines, was intended to link programs in secondary schools and the colleges. In theory it held potential; however, according to the Coopers, Lybrand Report (May 30/84), Linkage II lacked some essential elements. First, the rationale for the program was not made clear to school administrators and there was no top management commitment (Ministry of Education personnel were not thoroughly knowledgeable about or supportive of the project). Second, the guidelines and conditions for implementation, implications and expected results were never developed or stated. Third, there was no method of co-ordinating or monitoring the process. Fourth, students participating in the program were poorly identified and programs were limited and poorly matched between schools and colleges. Fifth, students were not counselled between the institutions (there was no transition counselling) and there were no provisions for enrichment at the colleges for students who had done advanced work at the secondary level. Recommendations made in the 1984 report were not followed up and it is likely that the Linkage II initiative is not any longer a viable possibility.

Professional Development Programs

Human resource development has increasingly been identified as an area requiring greater attention. In the past few years secondary schools and colleges have begun to focus more attention on professional training. (This topic is discussed in the context of student success in section 3.) Following is a selection of several joint projects.

Durham College, Durham Elementary Teachers Association and the OSSTF-District 17 have jointly sponsored two "annual" professional day programs. The November 1988 program, called "Partners in Learning," held workshops at the college, elementary schools, high schools and other locations throughout the area. Over 55 workshops were offered on topics ranging from Learning and Teaching Styles to Career Assessment - CHOICES (for a description of CHOICES see career counselling below) to Income Tax and Planning for your Retirement. An estimated 3000 participants from the college, 84 elementary schools and 18 secondary schools attended.

For the past six years the Mississauga Board of Trade, the Peel Board of Education, the Dufferin-Peel Roman Catholic Separate School Board, Erindale College and Sheridan College have jointly organized

"Business Education Days." This last year the program was extended to a full month in order to reach more participants. The purpose of the business-education program is to bridge the gap between the education and business communities. Each year educators spend a day with a local business. Company personnel inform participants about the historical overview of their organization, current hiring practices, entry-level qualifications, up-grading requirements, promotion policies and management practices. Through informal discussions business and education participants are able to discuss and share other information as well.

For several years Humber College has hosted professional development programs for the Etobicoke Board. One of the more recent and innovative programs was a Indonesian Fellowship Program sponsored by the Asian Development Bank and ACCC, and hosted by Humber College, York and Etobicoke Boards of Education. Sixty Indonesian teachers came to Ontario to participate in a teacher training-skills update program at Humber. Forty-five of the teachers were here for a year while the remainder stayed for six months. The teachers also spent two weeks in the York and Etobicoke schools.

The Technology Division of Humber College has, during the last year, sponsored several "Development Days" for guidance counsellors and teachers of technology in the Etobicoke, York and Metro Separate Boards. Teachers have toured Humber facilities and attended workshops offered by Humber faculty members.

Algonquin College has established an Admissions' Advisory Committee composed of secondary school counsellors from five boards of education and Algonquin staff. The committee meets throughout the academic year to discuss a variety of topics related to school-college liaison. Algonquin also sponsors annual information sessions for counsellors and other secondary staff.

College Counselling

College counselling has, in the past few years, been increasingly recognized as an important activity. Several major events were inaugurated in the past year.

There is a province-wide "College Information Program," described by one of the participants as a travelling side show, in which all the colleges have representatives who tour the province as a group visiting boards and secondary schools. The program consists of classroom sessions with approximately 30 students at each, large sessions with up to 500 students at a time and display sessions where students can meet with a college representative on a one-to-one basis. During their presentations, college representatives discuss the major differences between college and university and give information specific to their college. This information includes full-time programs, admission requirements and an idea of college life on their campus(es). Last year the program was presented at between 150 and 200 schools. There has been an increase in requests from students for information about careers during the college sessions and an increase from schools for career videos.

Last November (1988) "College Day" was inaugurated in North York. All the colleges were asked to attend a one-day seminar for students in grades 11 to 13 and their parents. This year a similar program — "College Exploration '89" — sponsored by Peel Board is planned and students from the surrounding area will be bussed to the event.

Metro area colleges have frequently been asked to make presentations to students at "brown bag lunch" and other special seminars held at secondary schools in the area.

Career Counselling

Career counselling has burgeoned since the Ministry of Education made it mandatory for all teachers to address the issue of careers. In 1984 the Ministry of Education issued "Guidance 84." This document states that all staff members are required to share the responsibility for guidance throughout the schools. In the same year, *OS:IS* announced that a career component would be introduced into each subject guideline. It also stipulated that 20 hours of career education would be mandatory in grades 7 and 8. Students in grades 9 and 10 were to have up to a maximum of three credit courses in guidance.

The Ministry of Education sponsors the Student Guide and Information Service (SGIS). It is a computer program made available as of June 1988 to all boards of education in the province. At one time students could write and request information about careers and post-secondary programs. The data set has now been consolidated and includes information on only the 500 most requested occupations and the training necessary for each. The mandate of SGIS is under review and college information may be reinstated.

Some joint career guidance projects in the province include the North York Board and Seneca "It's Your Choice," a hands-on one-day program for grade 7 girls to explore technology. This program served 200 girls in 1989.

In the summer Seneca launched a "Young Peoples' Careers Program" summer camp for students in grades 6 to 10. Students explored one of five career paths through hands-on and simulated experiences half of every day for a week. It is hoped this program will be expanded into a series of one-day workshops during the school year.

The North York Career Centre, sponsored by the North York Board of Education, Community Out Reach and Education Foundation (CORE), Costi-Education Centre, Employment and Immigration Canada, Jewish Vocational Services, Seneca College and York University, offers both group and individual career programs. Over 1000 students in groups and 200 individuals are provided with in-depth information each year. The Career Centre also provides career workshops for up to 300 mainly guidance and co-op teachers a year. These teacher workshops include both career information and "careers across the curriculum" activities.

A.C.C.E.S. (the Association of Career Centres in Educational Settings) and program development division is a new venture at George Brown College. It is made up of four departments: Community Outreach and Program Development; Adult Access (upgrading and job-start "Operation Acceptance"); Youth Access (FUTURES and vocational orientation program); and, Educational Access Services (for the hearing impaired and learning disabled). The program's mandate is "to increase access especially by non-traditional learners to college programs and services through the consolidation and development of high quality diverse and innovative programs." The stated mission is that "every student should have the opportunity to succeed at George Brown College. To insure this our division will provide appropriate assessment, career counselling, preparatory and remedial programs, support services and exit counselling."

The Toronto Board of Education, George Brown College and the City of Toronto jointly fund two career counselling centres. Services include career assessment, career orientation and work placement. Information about educational opportunities is also available and staff can assist those who need help in making arrangements and applying to various programs.

CHOICES, a specially designed computer program consisting of two parts — careers and schools — is used by students in about 1,200 schools across Canada, as well as schools in the U.S. and Europe. (Data bases pertinent to the U.S. and Europe are available.) About 450 of the larger secondary schools representing 80% of students in Ontario had access to CHOICES as of September, 1989. In the careers section, a 40 page booklet guides students through a self assessment. There are 16 topics to review. These include interests, temperaments, aptitudes, worksite preferences, educational plans, future employment demands, earning expectations and environmental conditions. Students feed their responses into the computer where it reviews 885 careers and generates a list with from 10 to 30 occupations. Occupational information is updated annually by Employment and Immigration Canada. The education section begins by linking occupations and potential college and university programs. When the student identifies a program, the computer generates information on admission requirements for that specific institution. It may include subject requirements, minimal grades, portfolio, and any additional courses that may be suggested but not required. The education section is also updated yearly by guidance advisors. A specific college or university can also be targeted and the computer will scan all programs at the chosen institution. Career planning, however, is the stated major focus.

It is tempting to go on because the scope of innovative programs is so broad and inspiring. The point is that programs do exist. They are for the most part new, however, and there is plenty of room for expansion and imagination. Questions raised in relation to joint initiatives other than articulation centre around how to better communicate "good ideas," how to morally and financially support such initiatives, and how to provide provincial guidelines for programs such as SWAP and co-op and at the same time keep programs responsive to local needs. What lessons can be learned from the failure of the Linkage II initiative? Can the creativity now emerging in school/college relationships and the responsiveness to local needs be maintained if relationships are provincially defined and mandated? What mechanism is necessary, if any, to stimulate the creation of new initiatives?

4.4 Models for Articulation

Articulation is a term used to describe a formal relationship between two institutions based on agreed terms for the purpose of linking two or more educational systems.

Articulation Models in Ontario

Seneca College/Vanier Secondary School

Seneca College and Georges Vanier Secondary School officially entered articulation negotiations in January, 1988. Both institutions had been experiencing difficulties and both were looking for ways to resolve them. Articulation became their vehicle.

Initially they were looking for a way to eliminate gaps and overlaps in curriculum. They considered articulation models from the United States which aligned curricula and offered preferred entry but they wanted a mechanism which would also allow them to determine the critical skills essential to each vocation — the basic elements that would set the students up for success at the college.

The two sides agreed upon a set of guidelines which they called "principles of success" and then engaged staff committees to work out the details, to draw up skill profiles and outcome statements. Three sets of college faculty members were initially involved with Vanier staff; faculty represented three programs: travel and tourism, office administration and technology. Vanier courses were appraised to determine whether content fit the criteria for success at the college. In some cases, secondary staff found that certain areas of content needed to be changed, while in other cases the Seneca faculty found that some secondary courses were more solid than they had previously thought and agreed to change entrance practices in accordance.

Outcomes are occurring from articulation in several major areas. First, Vanier teachers are in the process of shifting from an instructional model of "information giving" to one of "skills building." The model that is emerging is more holistic and the staff committees are interdisciplinary. Course packages are built upon a set of basic skills which include communication skills, problem solving skills and life skills. These skills will be the focus for all students, regardless of whether they will be taking basic, general or advanced level courses or whether they will enrol in the articulated programs. Second, both the college faculty and the secondary staff who have taken part in the articulation deliberations understand their complementary and their respective goals better. Secondary staff can now build into their teaching and other interactions with students a sense of direction and relevance. College faculty will know what skills these students have and can improve their course planning. Third, articulation agreements connect packages of Vanier courses with Seneca programs in six areas so far, with an additional six planned for June, 1989. Along with a substantial career planning guidance program, students beginning in grade 9 can plan their secondary courses with a more definite goal in mind. It is strongly hoped that this approach will encourage students, especially those in general and basic level courses, to remain in school and to have a better outlook on their futures. Students who have successfully completed the secondary course packages in grades 11 and 12 will have the guarantee of college entrance, and in some cases, they will also have advanced standing. A fourth outcome of the discussions between college faculty and secondary staff has been the planning of student activities; several different activities took place during the course of this year. Some Vanier students have taken their classes in Seneca labs while Seneca students have visited classes in Vanier to inform students about college programs. An unanticipated side benefit has been that both college faculty and secondary faculty are communicating across disciplines and are sharing ideas with a focus on student success. Administrators from different schools are coming together to exchange information and work with teachers to break down formerly competitive barriers. Another type of exchange has been with staff and faculty; secondary staff were contracted to teach the Ontario Basic Skills Program at Seneca and some thought has been given to have secondary staff teach college preparatory courses.

Centennial College/Scarborough Board

Centennial College has several articulation projects in progress. Centennial offers an accounting course for Scarborough Board adult education students enroled in co-op. Students in this course are co-registered and receive both secondary and college credit for the course.

During this past school year Centennial, on a trial basis, placed two Metro Separate School Board "gifted" students in two of their regular business courses. The students were assessed along with the regular college students but they weren't registered in the courses nor did they receive credit for them. Negotiations are underway to formally register secondary co-op students in Centennial next year and to grant them college credits.

Centennial and Scarborough Board have developed course packages for secondary students in the technology areas. Centennial has offered preferred-entry to students who complete the packages; however, no advanced standing will be given. Negotiations with the business department of Centennial have taken place to articulate a business studies package that will offer advanced standing based on in-depth analysis of skill competencies. Scarborough family studies personnel are also trying to work out agreements with several Centennial programs. These agreements are strictly informal and have been agreed upon by board co-ordinators and the Centennial registrar who has acted as an articulation facilitator. Thus far, Scarborough has not developed a promotional strategy for articulation and the agreements are not operational.

Scarborough Board is also negotiating with George Brown College to articulate a program in gerontology.

Durham College/Durham Board

Durham Board, after meeting with a Ministry of Education official, approached Durham College in September, 1988 to look into the possibility of entering into an articulated relationship. A steering committee, composed of Board of Education members, O'Neill Collegiate teachers and administrators, and Durham College representatives, set out to investigate ways to better co-ordinate secondary curriculum with that of the colleges, to take out duplications, and to offer students advanced standing credits. Curriculum sub-committees were formed at O'Neill in English, math, science and other areas directly relevant to college programs to review competency levels for high school students.

Articulation contracts, that follow with variations the Seneca model, were signed in December, 1988 in accounting, data processing, food and beverage management, early childhood education, trades and vocational skills, and the technologies: mechanical, civil, electronic, and engineering. Other board programs such as SWAP and co-op were also considered in the articulation arrangements.

Starting in January, 1989 a college representative worked as a liaison person and introduced the programs to students in their guidance classes. The articulation program was also the topic of an assembly for all students. Tours of the college were arranged for O'Neill students. After the assembly, about 300 students indicated interest and, thus far, approximately 50 have enroled for fall 1989. Since 100 students from O'Neill enrolled at Durham College after graduation last year, it is expected that more students will enrol in the articulated programs. Students in general courses are being targeted for the articulated programs; however, students in basic and advanced level courses are also being considered.

Durham Board plans to expand the programs to all of its 18 secondary schools. A new coordinator's position will likely be created this year. At present the Board is working through a guidance liaison person and the President of the college.

Etobicoke Board/Humber College

In September, 1988 Humber College and the Etobicoke School Board twinned their schools at the administrative levels in order to bring about closer links. A special workshop for the principals, vice principals and superintendents of York Board, York Separate Board and Etobicoke Board focused on "Excellence in Secondary Education." At that point the Etobicoke School Board decided it wanted a more formal arrangement with Humber and began negotiating for articulation.

Etobicoke has appointed a representative to work half time on articulation and Humber has also agreed to make someone available. Three secondary schools in north Etobicoke have been designated to be pilot schools. A contract has been drafted but is not yet signed to articulate programs in technology, travel, and business. The next step will be to bring faculty together to work out the details. The Seneca/Vanier model is being used as the blueprint.

Articulation Models in Canada

Newfoundland

In the fall of 1972, a pilot project on pre-vocational education was initiated. Subsequently, pre-vocational programs were implemented in several other school districts and the Task Force on Education (1979) recommended that pre-vocational education be extended to all pupils in Newfoundland. The "pre-vocational" program was begun with the recognition that existing secondary facilities were not adequate for teaching specialized courses, especially in industrial arts, business and family studies/home economics. At that time the newly built district vocational schools had excellent facilities and their enrolments were not high; therefore, there were classrooms and labs that were not being fully utilized. Arrangements were made on a regional basis to have secondary students go to the vocational schools to take courses in three vocational areas taught by trade school faculty. Starting in grade 9, students would take three vocational classes at the trade school. In grade 10 they would focus on two areas and in their last year of school they would take only one such specialized course.

In 1983, when secondary education in the province was restructured, the pre-vocational program became the "industrial education" portion of the secondary curriculum. Credits were applied to all courses, and more formal arrangements were made between the vocational schools and the school boards as to who would teach which courses. The same courses were taught province-wide. Some were offered in the vocational schools and some in the high schools, the only differences being the site and the fact that general education faculty at the secondary schools were beginning to teach more of the courses. Presently 4000 to 5000 students in the province take some of their secondary courses on college campuses in the following areas:

Industrial courses:

electricity
electronics
drawing/planning
drafting
2 metalworking
2 woodworking
car mechanics
marine industries
home maintenance

Business Courses:

typing
general business

Other Courses:

family studies
computer studies

Although these courses are credited toward a secondary diploma, they are not credited toward college certificates, nor are they presently given any special recognition for college entrance. Prior to 1983, students who had completed all three years of the pre-vocational program were given "points" toward admission in the vocational schools, but they received no advanced standing.

With the recent transition of the district vocational schools into five regional colleges in 1987-88 with their own boards of governors, what was once "free" space is now being considered for its revenue generating possibilities. Secondary schools are now building their own labs and the demise of the relationship has been predicted within the near future. With a trend away from vocational training at the secondary level, "pre-vocational" training is no longer part of the high school curriculum. Future innovation in Newfoundland secondary education seems to be heading toward the implementation of technology education and no new relationships with the colleges are being considered at this time.

Between 1973 and 1976 several studies indicated the success of the program. In 1979, a two-year study to determine the impact of the program on the personal development of students in one school district was completed, indicating overall that pre-vocational education at the colleges in conjunction with guidance programming at the high school had a significant impact on the self-esteem of grade 9 general students and student plans for post-secondary training, and led to longer term avocational interests for some students. The researchers questioned whether subsequent post-secondary training actually represented greater opportunity for students or whether their choice was driven by pre-vocational experience and the option for preferred entry in the college. The study also indicated that there were some problems with the program. A further evaluation of the pre-vocational program in 1983-84 considered time-tabling, course offerings, instructor qualifications and in-service training, instructor workload, liaison committees, student hours of attendance and other concerns. A number of recommendations were made to address local and system problems. (For those interested in further information, the two reports are available at the Council of Regents Office.[88]) A longitudinal study on dropouts in Newfoundland is now underway with the possible effect of the secondary/college relationship being considered. Data will be analyzed on the 1987-88 cohort later this summer and it is hoped that the study will continue for the next five years.

Prince Edward Island

For many years Holland College in Prince Edward Island has had an extensive "integration" program with the secondary schools in both Summerside and Charlottetown. The outcome of a formal agreement negotiated between Holland College, the Department of Education and the Department of Industry is that Holland College provides vocational training for secondary students. Presently, approximately 500 students are bussed for half a day to Holland campuses to take courses in any of the trade program areas offered at the college. Students in grade 10 are in a "pre-vocational" program in which they are encouraged to survey courses in several career areas. Students in grades 11 and 12 are fully "integrated" into college level courses and receive a record of achievement upon completion of their two years. These students also spend a half day studying core subjects at their secondary school.

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[88] William Spain and Mildred St. Croix, "Satisfaction, Interests and Vocational Development in the Pre-vocational Education Programme," (St. John's, Newfoundland, 1979); Cyril Farrell, Ross Clarke, Frank Pollett, "High School Courses Offered in District Vocational Schools: The Problems, Concerns and Recommendations," (Newfoundland, 1984).

A major provincial review of the Holland program was recently completed. *Vocational Education on Prince Edward Island: Some New Directions*, also known as *The Glendenning/Hall Report*, suggests that the stigma attached to students in the integration program is detrimental to the well-being of all students and that the college is not adequately prepared to meet the needs of adolescents. Furthermore, it was argued that a future oriented education must include vocational education as well as general education for all students. Recommendations specific to the secondary school/college interface included in the report suggest that vocational training for secondary students become the sole responsibility of the secondary schools, a comprehensive high school model for program planning and approval be developed and extended across the province, guidance services for students who are not university bound be strengthened, a compulsory course entitled "Introduction to Technology" be offered to all grade 10 students, facilities at the unit high schools be expanded or renovated to accommodate the vocational programs and alternative modes of delivering high school education be employed, especially for those at risk of dropping out. Co-ordination of future vocational education would be administered by a "Provincial Vocational High School" curriculum committee.[89]

British Columbia

Following the conclusion of a two-year review of the effectiveness of its secondary schools in preparing students for future employment in 1979, British Columbia introduced pilot career preparation programs in various areas of the province. The result was the implementation of a "Career Preparation" program in 1980 which offers to grade 11 and 12 students concentrated study in a career field enabling students to acquire some entry level skills for employment and/or advanced placement in a college or provincial institute. The program includes four prescribed courses (English 11 and 12, Social Studies 11, Physical and Health Education); six career preparation courses; and two to four electives. A co-op component of 100 or more hours is part of all grade 12 specialty courses. Teachers of specialty courses must have journeyman standing or equivalent occupational competency in the instructional area.

A school board must apply to and receive permission from the Ministry for approval to operate a career preparation program. Approval is granted only after the Ministry is satisfied that the school can offer a quality program. Criteria for approval to offer or continue a Career Preparation Program includes the requirement that districts form a close liaison with the appropriate post-secondary agency to ensure that the six specialty courses will articulate with a specific program, and the formation of an advisory committee with representation from the secondary school, school district, local industry, unions or related associations and post-secondary institutions in the area. The functions of advisory committees are:

- To assist in determining and evaluating the needs which the program is designed to meet;
- To assist in defining relevant program objectives;
- To assist in promoting public awareness of the instructional program by colleges, unions, professional associations, employers and appropriate community groups and government;

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[89] Donald Glendenning and Thomas Hall, *Vocational Education on Prince Edward Island: Some New Directions, Vol. II*, (Prince Edward Island, 1988).

- To assist in securing community support of the instructional program, including formal recognition by industry and regulatory bodies, as well as government approval;
- To assist in the placement of graduates; and
- To assist in obtaining and co-ordinating student field experience in the community.[90]

In 1982 there were 31 program titles in the following eight career program categories: communications media, metal fabrication, natural resources, services, business, construction, mechanics and technology.

Articulation Models in Other Countries

The term "articulation" was coined and various models were developed in the United States. The National Center for Research in Vocational Education at Ohio State University published a report in 1986 called *Avenues For Articulation* based on an investigation of 18 articulation programs across that country. The report describes what's working in the field, essential practices in articulation, nurturing articulation programs and related issues. The study focused on "vo-tech" articulated curricula only. Three basic models of secondary/post-secondary articulation were identified: advanced placement, tech-prep, and vo-tech two-plus-two.

> "Advanced placement programs are often referred to as time-shortened programs because they grant postsecondary credits (i.e., advanced placement) for accomplishments at the secondary level. Credits are awarded in various ways. They may be awarded directly without testing, requiring only confirmation of accomplishment by the high school teacher. In some instances students must complete a specified number of postsecondary credits before the advanced placement credits are recorded on a transcript. Another approach to advance placement is for the college to test students before awarding credits for the competencies achieved in high school. These time-shortened, advanced placement programs are the most common kind of program coordination efforts today. Advanced placement is also the least complicated form of articulation since fewer curriculum changes are required. ... The next step up the articulation ladder is tech-prep or core curriculum programs. In this type of articulation the demands of the occupational area or cluster of occupations are examined to see what academic and pretechnical foundations are needed to master the higher-level technical competencies required. This usually results in changing the secondary curriculum to provide stronger applied science, technical reading and writing, mathematics, and computer skills. Postsecondary institutions then revise their curricula to fit this strong foundation. ... Vo-tech two-plus-two programs contain the greatest promise for educational impact through articulation. They also require the highest degree of institutional involvement and change. Vo-tech two-plus-two programs take a total view of preparing for an occupational area during grades eleven through fourteen. A two-plus-two program is seen as a four-year curriculum with exit points along the way. Usually faculty members, administrators, and employers are involved in planning the curriculum and deciding what is to be taught at each grade level. A career ladder approach permits students to exit the program after grades twelve, thirteen, or fourteen with a diploma, certificate, or associate degree."[91]

The National Center found successful articulation programs are based on the following ten basic principles:

1) The provision of leadership from the top;

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[90] British Columbia Ministry of Education, *Career Preparation Program*, (Victoria, B.C., 1982), p. 11.

[91] Descriptions of these three models come from the article "College Bound or Bust" by the investigators of the National Center study, Catharine Warmbrod and James Long, *AACJC*, (October/November 1986), p. 29.

2) Early involvement of faculty;
3) Relationships built on respect and trust;
4) The insurance that all parties benefit;
5) Agreements put in writing;
6) Communication;
7) Starting small and building;
8) Making someone responsible;
9) Building competency-based curricula; and
10) A focus on goals, not turf.

It was also noted that articulation in the United States has led schools and colleges to share facilities, faculty, counsellors, placement officers and other program elements.

Interest in Articulation, the researchers found, seems to rise and fall over the years. They report that

> It increases when enrollments decline, when policy makers mandate cooperation, and when new instructional approaches (such as competency-based education) make coordination easier. Some institutions with both secondary and postsecondary missions routinely coordinate their vocational technical programs. Articulation tends to decrease when funding is not available to support the staff involved in linkage or to develop the necessary competency-based curricula. Articulation also wanes when enrollments increase and when institutions deliberately seek to enhance their academic prestige. In the former case, there is an abundance of customers for education and special attractions need not be offered. In the latter case, administrators may believe that a prestigious institution "gives away nothing" and makes admission difficult.[92]

4.5 Implications of Articulation Agreements in Ontario with Regard to Governance

At this point articulation projects in Ontario are still in an initial phase. Seneca and Durham Colleges have been able to designate one person to oversee the administrative process of articulation between the college and one secondary school or one school board. Scarborough Board has only one articulated course with Centennial and they are in the process of drawing up an agreement with George Brown in one other area. Centennial College has made some tentative moves toward formal articulation agreements.

However, it is quite conceivable that other schools and boards within the catchment areas of the colleges will also want to articulate their programs. There is already some movement afoot to do so. It is also possible that individual schools will want to develop articulation agreements with more than one college. Not only is it possible, but it is the stated intention of the schools presently involved to articulate with other colleges that offer programs their students want to access. The administrative complications extending from such possibilities, considering the complexity and demands of each sub-section of an agreement, goes far beyond the capabilities of one articulation consultant. Although flexibility will be demanded by the differences existing in institutions, some ground-rules or even legal regulation may be required.

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[92] James P. Long, Catharine P. Warmbrod, Constance R. Faddis and Max J. Lerner, *Avenues for Articulation: Coordinating Secondary and Postsecondary Programs*, (Columbus, Ohio, 1986), p. 63.

One might also wonder what will occur if major policy shifts take place in either sector. What implications will policy change have on articulation agreements that are subject to five-year contracts, or conversely, what impact will five-year articulation contracts have on policy reform? Present articulation agreements have change clauses; however, each agreement represents hundreds of hours of negotiation and schools are not likely to want to re-do agreements. What effect might changes in articulation agreements have on students who are affected by those agreements?

Another area that will be affected by articulation, and that Seneca has had to consider, is that students will be entering college in the future with even greater variance in skills and needs. College programming will either have to be more flexible or access to colleges will have to become more limited. Seneca is now contemplating an open access policy that will allow students more time in programs if they need it or advanced placement if they are already prepared. Articulation poses another possible problem with regard to access. If a greater number of students come through articulated programs in secondary schools, will the colleges be able to accommodate all of them and, given financial restraints, will it put further pressure on the colleges to limit access for less well prepared students? As long as enrolment in college courses is low, preferred entry will pose no problems to colleges; however, present admissions policy precludes guaranteed placements. What will happen to students who have been promised preferred entrance if enrolments in articulated programs increase?

Presently the Ministry of Education and the Ministry of Colleges and Universities are merely serving as advocates of articulation. Will the colleges continue to be able to administer articulation agreements or will some other agency, such as one of the Ministries, need to assume responsibility for their regulation, execution and management? It was noted in the U.S. experience that interest in articulation increases when enrolments decline and when policy makers mandate co-operation. Should interest in articulation be left subject to fluctuations in enrolment and administrator interests?

Some forms of articulation, those that effect alteration of curriculum, are best suited to a competency-based system. Are colleges and schools willing to move in that direction in order to support articulation? Furthermore, does the province want to adopt a competency-based model of education for either the colleges or the schools?

Three other problematic areas are: the costs associated with providing release-time for staff and faculty to work on articulation, the requirement for in-service training for teachers to prepare them for adjusting to new instructional models, and the fact that some schools and colleges are not ready to take on articulation. What will that mean for the students attending or wishing to attend those institutions? Financial, personnel and administrative contingencies may well be considered at this stage.

Appendix

Figure 2.1

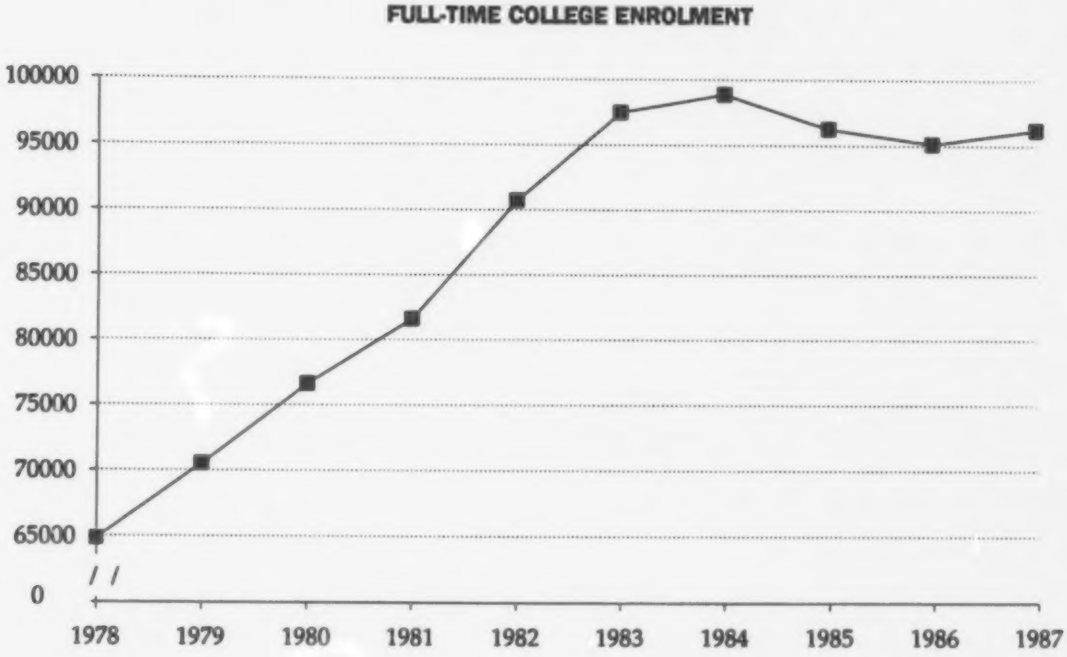

Figure 2.2

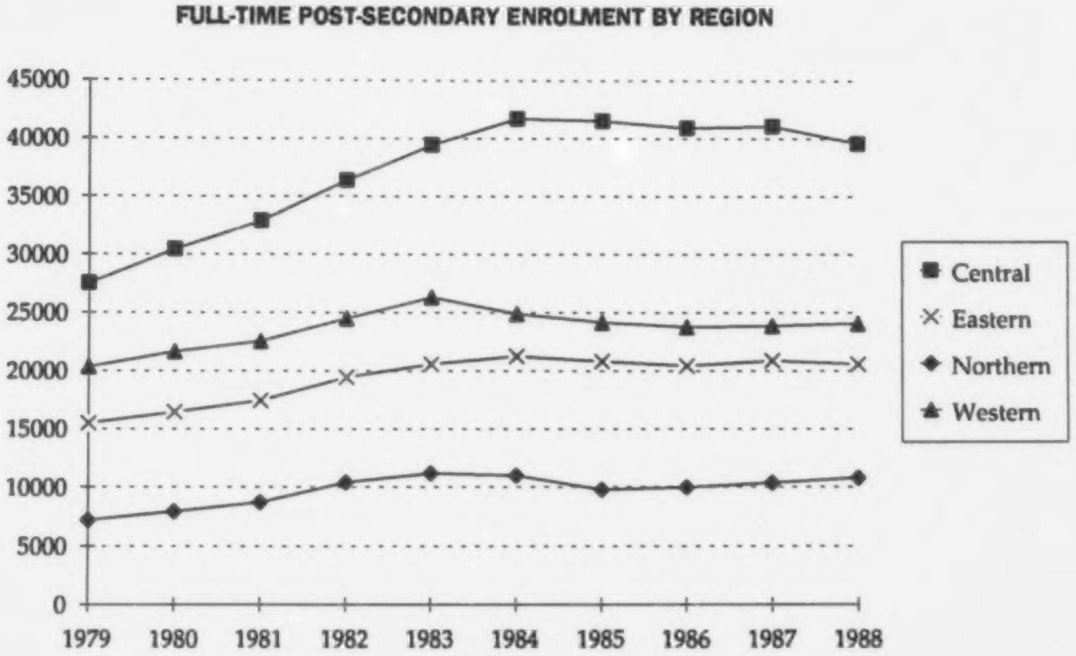
FULL-TIME POST-SECONDARY ENROLMENT BY REGION
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Figure 2.3

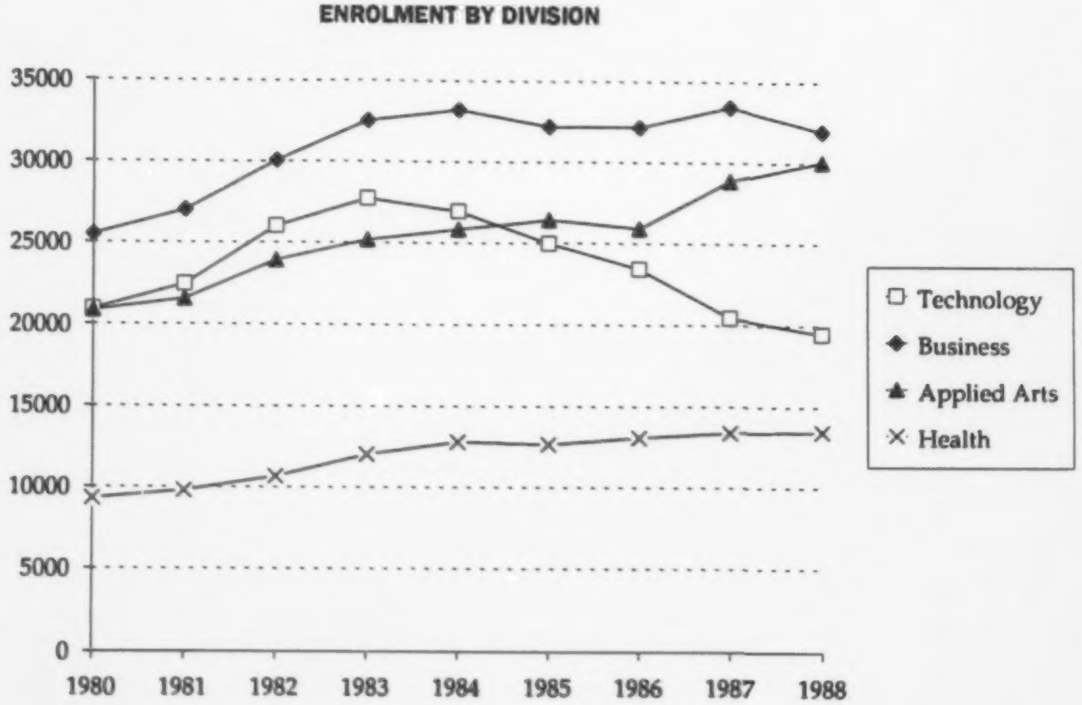
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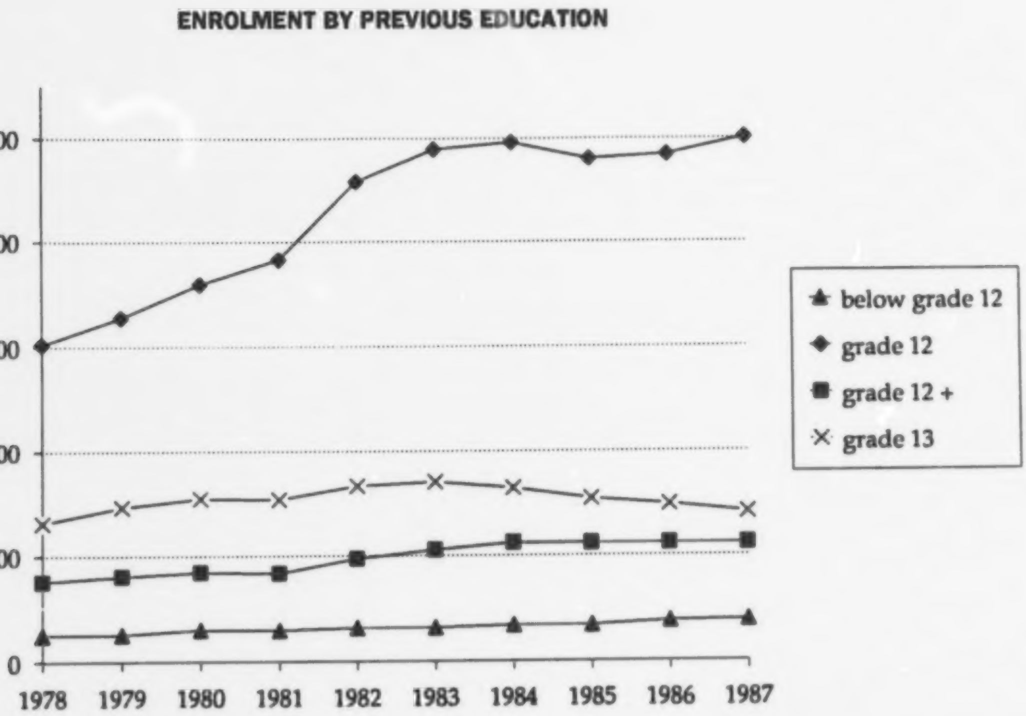
Figure 2.4


ENROLMENT BY PREVIOUS EDUCATION
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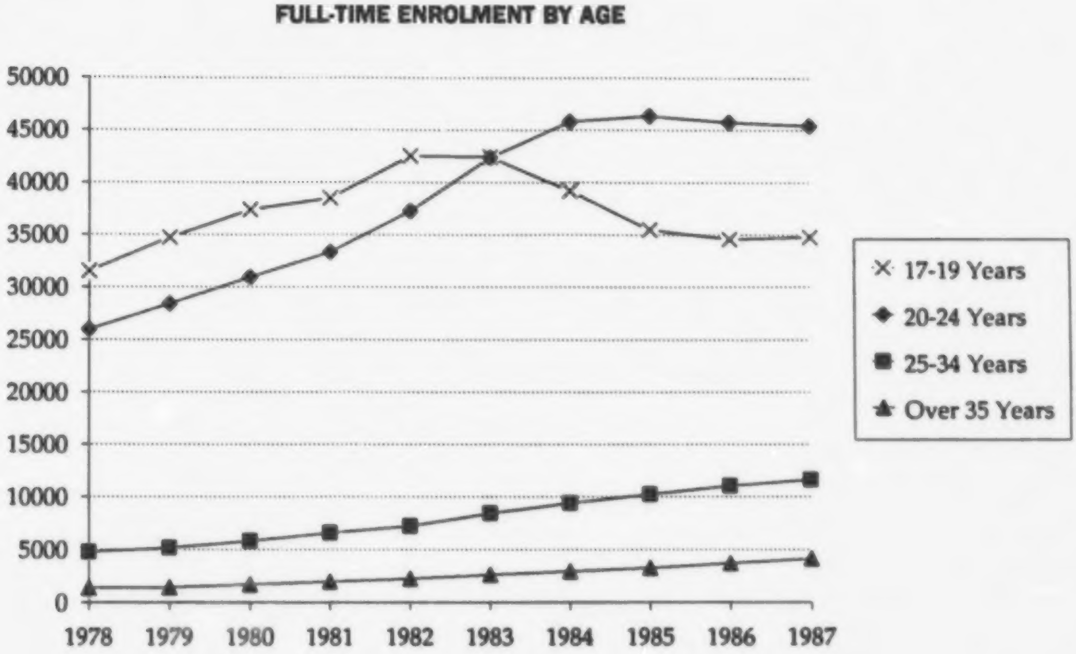
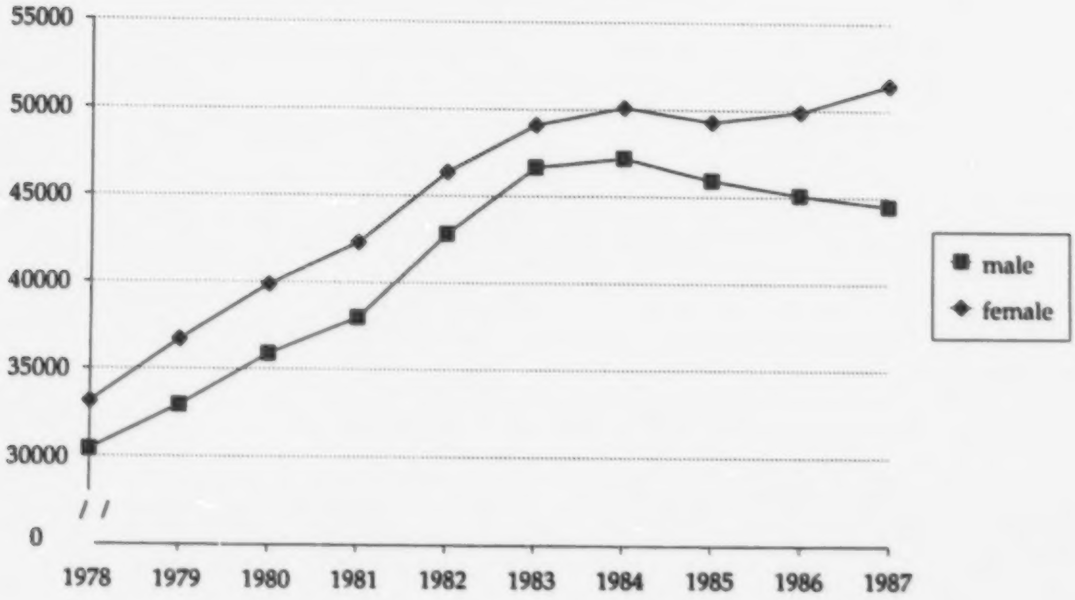
grade 13

Figure 2.5



FULL-TIME ENROLMENT BY AGE

Figure 2.6



FULL-TIME ENROLMENT BY GENDER

Figure 2.7

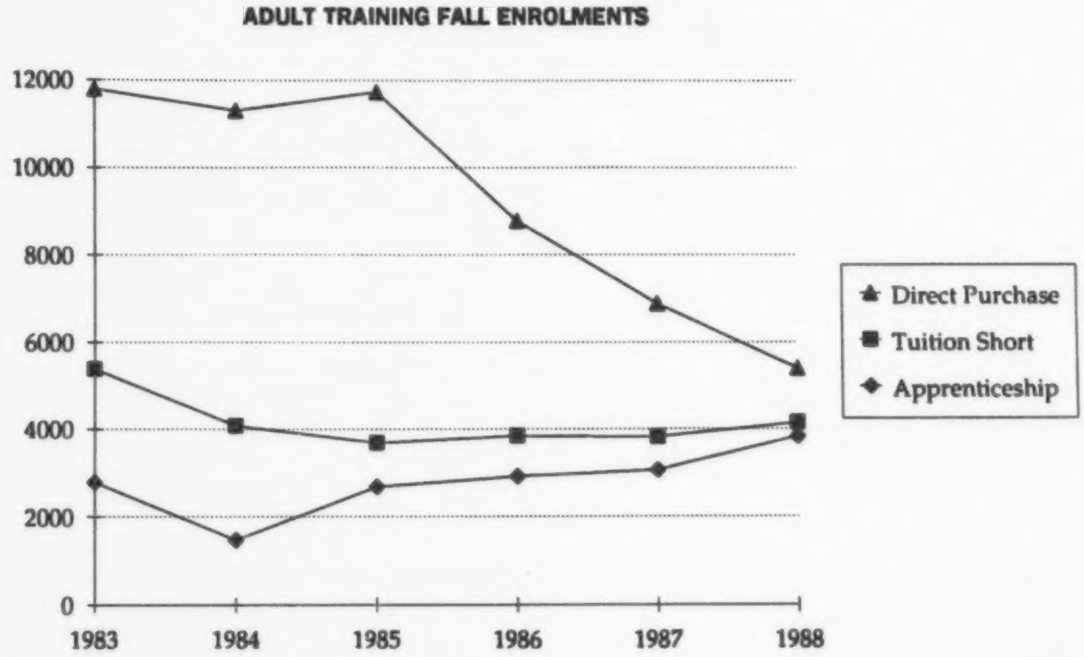

ADULT TRAINING FALL ENROLMENTS
12000
10000
8000
6000
4000
2000
0
1983
1984
1985
1986
1987
1988
▲ Direct Purchase
■ Tuition Short
◆ Apprenticeship

Figure 2.8

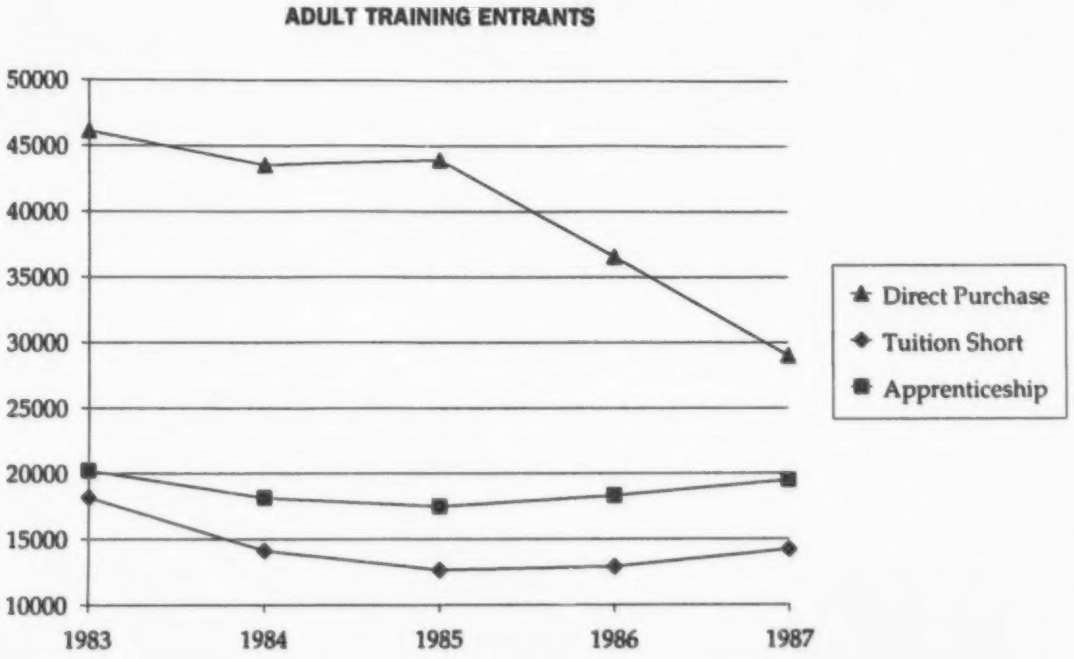

ADULT TRAINING ENTRANTS
50000
45000
40000
35000
30000
25000
20000
15000
10000
1983
1984
1985
1986
1987
Direct Purchase
Tuition Short
Apprenticeship

Figure 2.9

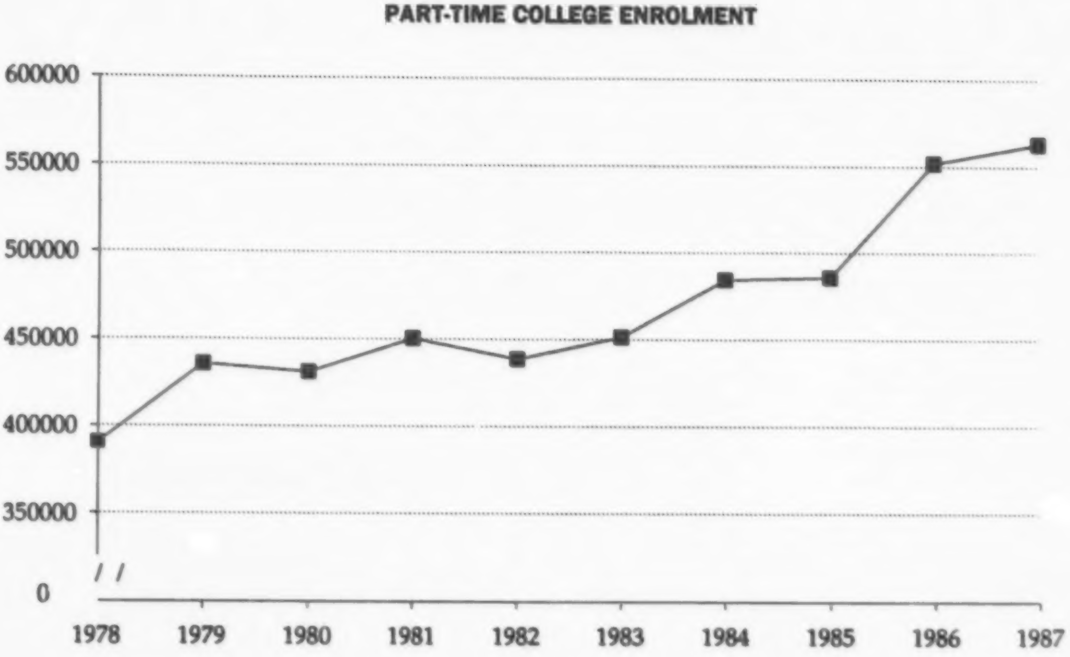

PART-TIME COLLEGE ENROLMENT
600000
550000
500000
450000
400000
350000
0
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987

Figure 2.10

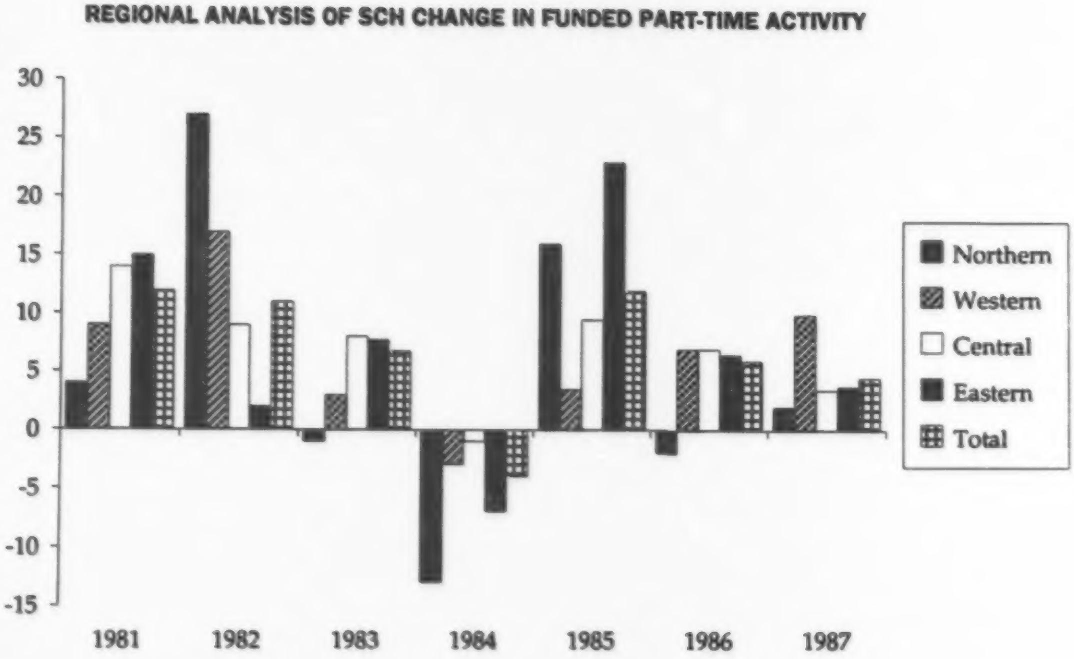

REGIONAL ANALYSIS OF SCH CHANGE IN FUNDED PART-TIME ACTIVITY
30
25
20
15
10
5
0
-5
-10
-15
1981
1982
1983
1984
1985
1986
1987
Northern
Western
Central
Eastern
Total

Figure 2.11

ACTUAL AND PROJECTED* FULL-TIME ENROLMENT

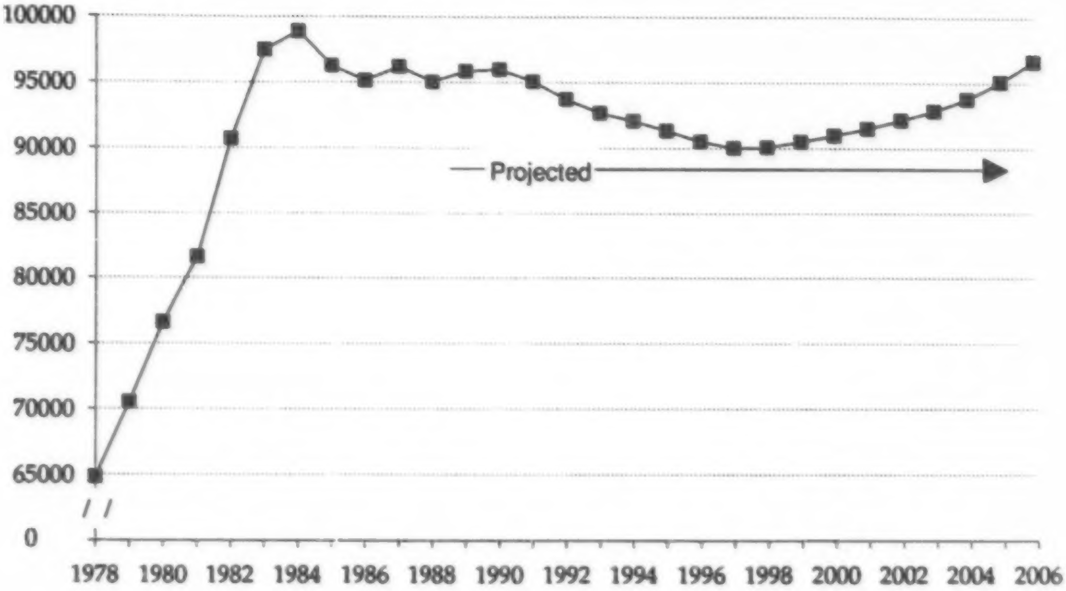


Figure 2.12

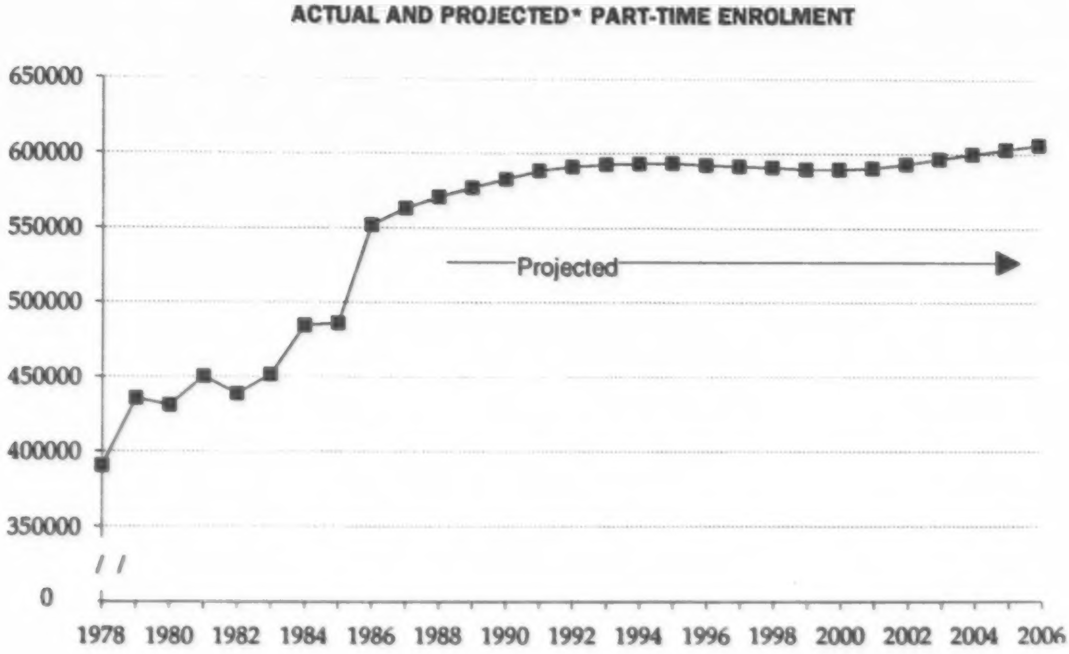
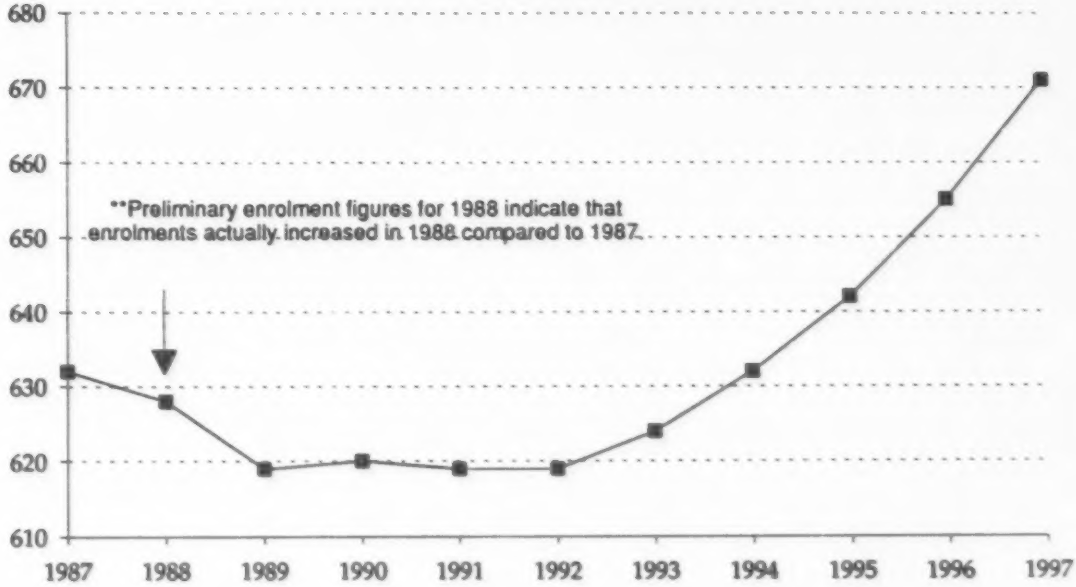

ACTUAL AND PROJECTED* PART-TIME ENROLMENT
650000
600000
550000
500000
450000
400000
350000
0
Projected
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006

Figure 2.13

ENROLMENT PROJECTIONS
Secondary School Enrolment to 1997
Total Public & R.C. Secondary
Enrolment (thousands)



**Preliminary enrolment figures for 1988 indicate that enrolments actually increased in 1988 compared to 1987.

Table 2.5

Progress of students, Grade 9 to first year postsecondary (including private), 1979–83[1]

Progression des élèves de la 9^e année à la première année d'études postsecondaires (y compris les écoles privées), 1979–1983[1]

Grade	Grade 9 in 1979 Enrolment	%	1980 Enrolment	%	1981 Enrolment	%	1982 Enrolment	%	1983 Enrolment	%
Année	*9^e année Effectif en 1979*	%	*Effectif en 1980*	%	*Effectif en 1981*	%	*Effectif en 1982*	%	*Effectif en 1983*	%
9 / *9^e*	(1979) 168 334	100	(1980) 156 805	100	(1981) 150 180	100	(1982) 147 677	100	(1983) 149 818	100
10 / *10^e*	(1980) 157 434	94	(1981) 147 850	94	(1982) 144 565	96	(1983) 143 399	97	(1984) 145 097	97
11 / *11^e*	(1981) 146 304	87	(1982) 140 894	90	(1983) 138 382	92	(1984) 135 794	92	(1985) 139 708	93
12 / *12^e*	(1982) 138 300	82	(1983) 136 212	87	(1984) 132 227	88	(1985) 129 128	87	(1986) 132 823	89
SSGDs / *DES*	(1983) 104 004	62	(1984) 105 425	67	(1985) 100 290	67	(1986) 100 826	68	(1987) 102 985	69
Fall enrolment in CAATs of Grade 12 graduates *Inscriptions d'automne aux CAAT des diplômés de 12^e*	(1983) 21 458	13	(1984) 20 646	13	(1985) 19 163	13	(1986) 18 764	13	(1987) 19 034	13
13 / *13^e*	(1983) 72 216	43	(1984) 69 932	45	(1985) 69 653	46	(1986) 71 890	49	(1987) 77 596	52
SSHGDs / *DESS*	(1984) 46 324	28	(1985) 44 809	29	(1986) 43 766	29	(1987) 47 105	32		
Fall enrolment in CAATs of Grade 13 graduates *Inscriptions d'automne aux CAAT des diplômés de 13^e*	(1984) 5 256	3	(1985) 4 771	3	(1986) 4 723	3	(1987) 4 244	3		
Grade 13 registered applicants at Ontario universities *Diplômés de 13^e inscrits dans une université ontarienne*	(1984) 30 740	18	(1985) 30 767	20	(1986) 31 407	21	(1987) 33 685	23		

---

[1] The figures shown in the percentage columns (%) are percentages of the corresponding Grade 9 enrolments. The grade enrolments used in the calculations are simply yearly counts unadjusted for movements into and out of the system.

[1] *La colonne « % » indique les pourcentages de l'effectif de 9^e année correspondant. L'effectif indiqué pour chaque année d'études correspond aux inscriptions annuelles et ne tient pas compte des mouvements d'élèves.*

Source: *Education Statistics Ontario, 1987*, Table 2.10, MOE

Figure 2.14

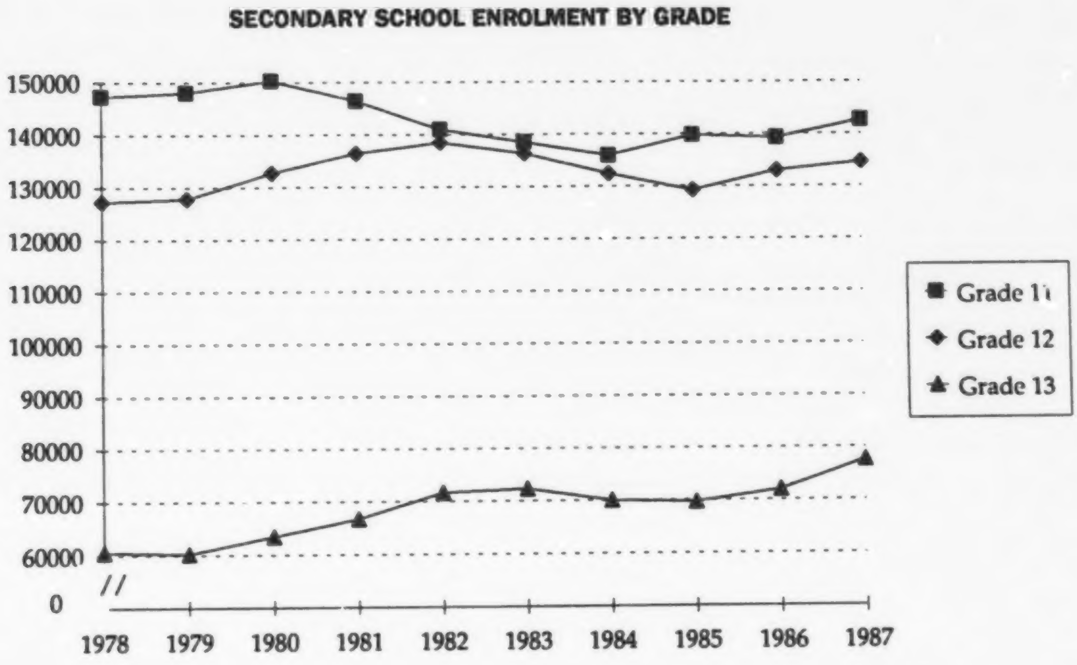
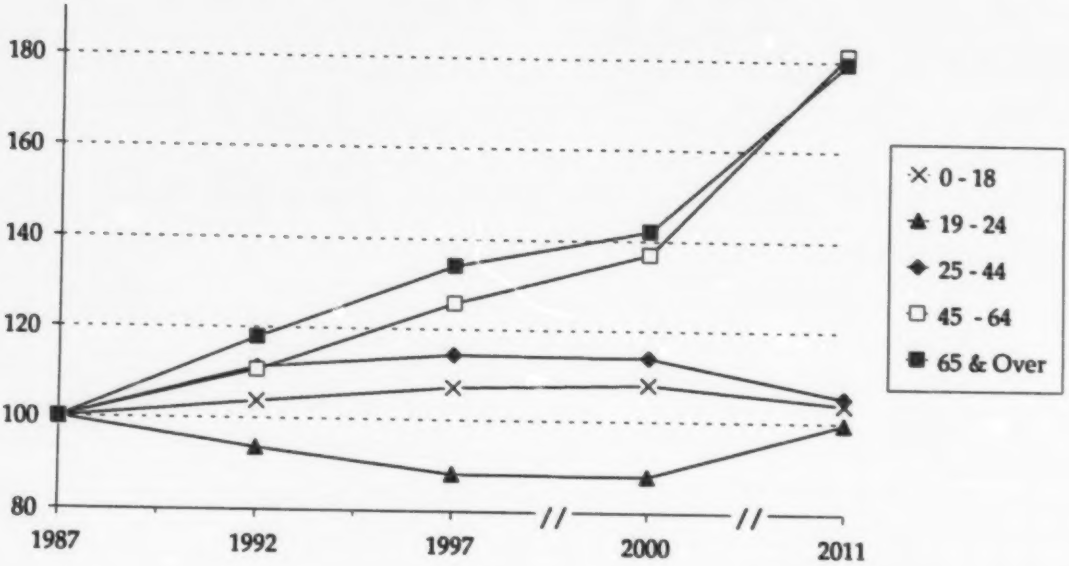

SECONDARY SCHOOL ENROLMENT BY GRADE
150000
140000
130000
120000
110000
100000
90000
80000
70000
60000
0
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
Grade 11
Grade 12
Grade 13

Figure 2.15

GROWTH IN ONTARIO'S POPULATION BY SELECTED AGE GROUPS, 1987 - 2011



Sources: Historical Data: Ministry of Treasury and Economics, *Ontario Statistics 1986*; Projected Data: Ontario Ministry of Treasury and Economics

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Colleges and
the Educational
Spectrum

Colleges and Schools

Background Papers

Felicity Corelli

Summary of Submissions Received in Response to "An Invitation to Participate"

Study Team 5

Summary of Submissions Received in Response to "An Invitation to Participate"

Summary

A mass mailing of a questionnaire and "Invitation to Participate" (Appendix A) was sent out in May to approximately 500 school boards, colleges and key constituencies across Ontario. A total of 55 responses (Appendix B) were received.

The majority of the respondents chose to answer each of the Study Team's questions specifically and in order. Others addressed the issues they viewed as most important or relevant to their own situation, and yet others introduced new questions or ideas into the mix. The process of synthesizing the responses involved identifying key themes in individual submissions as well as those tending to emerge throughout.

It became clear early on that it would be difficult to isolate these themes entirely from one another. Just as the topics under discussion by the Study Team impact upon each other, so the issues raised by respondents are inter-related. For example, it is difficult in some instances to separate suggestions for joint mandates from matters connected to the school/college relationship. Similarly, the exchange of information concerning school course competencies and college prerequisites, which also forms part of that relationship, can have a direct impact on a student's access and success. Some repetition has therefore been necessary from time to time.

Themes

It was possible to organize the responses into four major areas, each with its own subcategories. The following are the four key themes:

- Linkages
- Meeting the student's needs
- Access, competence, and success
- Roles and mandates of schools and colleges

Résumé des commentaires reçus en réponse au questionnaire

Sommaire

En mai dernier, le questionnaire (Annexe A) a été expédié par la poste à environ 500 conseils scolaires, collèges et principaux groupes concernés en Ontario. Un total de 55 réponses ont été reçues (Annexe B).

La majorité des répondants ont répondu de façon détaillée à chacune des questions du groupe d'étude et dans le même ordre que celles-ci étaient posées. D'autres ont mentionné les questions qui leur apparaissent les plus importantes ou pertinentes par rapport à leur situation, tandis que d'autres ont suggéré de nouvelles questions ou idées. Le processus de synthèse des réponses a consisté en l'identification des principaux thèmes abordés dans chacun des questionnaires reçus, de même que des thèmes sous-jacents.

Il est devenu vite évident qu'il serait difficile d'isoler ces thèmes individuellement. Tout comme les sujets étudiés par le groupe d'étude ont des répercussions les uns sur les autres, il en va de même des questions soulevées par les répondants. Par exemple, il est difficile de distinguer les suggestions relatives aux mandats conjoints des sujets se rapportant aux relations entre les écoles et les collèges. Par ailleurs, les échanges d'information au sujet des programmes d'études scolaires et des exigences d'admissibilité des collèges, qui font également partie de ces relations, peuvent avoir des répercussions directes sur l'accès et le succès des étudiants. C'est pour cette raison que certaines répétitions sont parfois nécessaires.

Thèmes

Il a été possible de diviser les réponses en quatre catégories principales ayant chacune des sous-catégories. Les quatre thèmes principaux sont les suivants :

- Établir des liens
- Répondre aux besoins des étudiants
- Assurer l'accès, la compétence et le succès
- Définir le rôle et le mandat des écoles et des collèges

Table of Contents

Page

Linkages 1

Communication of Course Competencies 1

College Expectations 2

Relationships Between Curricula and Programs 2

Meeting the Students' Needs 3

Access, Competence, and Success 4

Differences Between Stated and Functional Prerequisites 6

Helping Students to Meet Prerequisites 7

Roles and Mandates of Schools and Colleges 7

Meeting the Needs of a Changing Workforce 9

Towards a Collaborative Relationship 10

Appendix A 13

Cover Letter from the Ontario Council of Regents 13

An Invitation to Participate 14

Distribution List — Education System 15

Distribution List — College System 16

Appendix B 17

Submissions to Study Team 5

Linkages

By far the majority of school respondents report good general communication and relationships between the two systems. Phrases such as "very positive," "healthy," "open and cordial" and "mutually supportive" appear in successive submissions.

Standard school/college relationships include formal liaison and advisory committees, as well as informal activities and arrangements between guidance departments and college personnel and the administrations of the two systems. One board also mentions some cross-teaching, especially for continuing education, and others note teacher membership on college advisory committees and joint professional development activities. Among those with the most positive attitudes are schools and boards who have entered into articulation agreements with local colleges.

Those who are less enthusiastic frequently refer to their geographic location. While most schools in the province are able to receive additional information about colleges and programs through information visits, seminars, campus tours, guest speakers, "College Nights" (and "Days"), and other personal communication, northern and more isolated boards must rely, for the most part, on publications. Although they experience good relationships with local colleges, they are separated by time, distance, and cost from colleges elsewhere in the province. One such board, commenting on its "haphazard" relationship with more distant institutions, suggests a college computer database — perhaps similar to the SGIS format — to be updated monthly for distribution to all high schools in the province. (This issue is considered further under "Access, Competence, and Success.")

The colleges have several reservations about existing links. One notes that in spite of a considerably improved relationship, there is still a way to go. There is a feeling that schools tend to favour universities and are not sufficiently knowledgeable about the college system and its benefits for students. Another college attributes this to the fact that subject teachers and guidance counsellors are generally university-educated themselves and suggests orientation sessions and a "systematic campaign" to inform subject teachers about college offerings.

Noting a particularly good on-going relationship between college management and the administration of a local board, a college president nevertheless comments that there is "some sense that substantive input and consideration of crucial issues does not necessarily occur." The suggestion in this instance is for increased contact with secondary school principals and guidance counsellors, and for grass-roots contact between college faculty and school teachers.

A parent-teacher association describes the relationship between school and colleges as more tenuous than that between schools and universities, citing less public relations activity and geographic restrictions as possible explanations.

However, even those respondents who appear reasonably satisfied with the current general nature of the relationship are less positive regarding communication and information sharing in more specific areas.

Two such areas identified in the questionnaire concern the communication of schools' course competencies to colleges and methods of relaying information to schools about college prerequisites. For some respondents, the Study Group's questions identify a serious gap.

Communication of Course Competencies

With a few exceptions, it appears that there is no formal way in which colleges learn schools' course competencies. "Bluntly, they aren't!" and "Not very well" are typical comments. A high school principal queries, "Schools' or students' course competencies? Schools' are not communicated; students' are." Several responses point out the weakness of using only students' marks, and some feel that course competencies are likely judged on the students' success or failure in college.

One board prints a calendar of all courses offered in its high schools listing outcomes by course. Another shares course calendars and course outline material on request, noting that colleges have access to Ministry of Education course documents. From the boards' point of view, the current onus is on the school system to provide the information, although it should be up to the colleges to become aware of schools' standards and goals.

The Durham Board of Education observes that this area will need much work-experience in the Articulation program has shown that "communication of this nature is extremely time-intensive." An Integrated Apprenticeship Agreement began this year between the Durham Board, Durham College and the Ministry of Skills Development to produce a synopsis of competencies common to both secondary school curriculum and the basic level of apprenticeship theory. The Scarborough Board suggests that sample courses of study for each relevant subject be shared between school systems and colleges, with particular attention to necessary basic competencies.

The majority of responding colleges agree that there is currently no formal arrangement for soliciting or receiving this information. Algonquin College reports the inclusion of secondary school guidance counsellors on the Admissions Advisory Committee, and the use of Ministry of Education documents.

However, few respondents question the importance of relaying such information, and several suggest that expanded articulation programs may provide the means. A response from a school board comments on inconsistency both in conveying secondary school performance criteria to college staff and, conversely, in the inadequate explanation of college expectations to school staffs.

College Expectations

College expectations, in the form of information about prerequisites for programs, are generally communicated through regular information channels. Fanshawe College mentions "Horizons," the college calendar, program brochures and other publications, in addition to the College Information Program, workshops, and Career Days in elementary and secondary schools. Other methods identified by school boards include SGIS, the "Ontario Spectrum," and CHOICES.

Guidance counsellors, as the students' main source of all information concerning college entry and programs, are generally the first recipients of information concerning prerequisites. As in other areas relating to information exchange, the value of personal interaction is stressed frequently, between both college and secondary school personnel and between college personnel and secondary school students. Just how important is discussed further under "Access, Competence, and Success."

Relationships Between Curricula and Programs

In the diversity of opinion it elicits, consideration of relationships between secondary school and college programs and curricula is second only to issues relating to access. In one board's view, such relationships should be minimal. The school's curricula are broad and general; the college should be looking for a trained learner. "Complementary rather than overlapping," says another board. "Colleges have a right to know what to expect of students, " is the comment from the CFB Borden Board, "but school curricula should not necessarily reflect the demands of the college curricula. Not all areas lend themselves to meshing the curricula at secondary and post-secondary levels." Issues for other boards include the continued provision of opportunities for students who find at a later date that they would like to go in to particular subject areas and the need for more interaction between colleges and subject-related school departments. This last might include a college advisor to guide school curriculum writers concerning relationships with college courses.

"Colleges should have as significant an influence on secondary school curricula as universities do," says Fanshawe College. Cambrian College feels colleges should set up curriculum "in accordance with the level of competency of graduating high school students," adding that "hopefully these students have sufficient fundamental skills to successfully complete a college program."

The SAC President at Sheridan College observes that final year high school students should take courses related to their chosen discipline, "relevant courses that are NOT prerequisites."

The overall consensus, however, is that closer liaison between the two systems would benefit the student, initially through an easier transition, ultimately in a greater chance of success. Several boards mention lifelong learning and the resulting need for an education continuum. The Renfrew County Board calls for accepted common competencies in areas of generic skills and specific course competencies, as well as common ground in knowledge and attitudes. Algonquin College observes that the content of both school and college curricula should be well known, and that, to the extent possible, students should access college programs without having to do make-up courses.

Introducing the area of greatest contention by far for all school boards, the Bruce Grey County Roman Catholic Separate School Board suggests the relationship should be better explored by the Ministries of Education and Colleges & Universities. "If our general level courses cannot open the doors to success at the college level, both ministries need to examine curriculum that will breed success."

Meeting the Students' Needs

As key constituents consider the current relationships between schools and colleges, their aim is to examine the issues with the best interests of their client, the student who wants to attend college, at heart. Who is this individual? Where does he or she come from? How can the college system best accommodate his or her needs in terms of scheduling?

It is possible to draw from the submissions a fairly comprehensive picture of the student of today as well as the student of tomorrow.

For the schools, the client is not only the student who wants to go to college, but every student who might benefit from a college education were the opportunity available. This includes students studying at all levels of difficulty, returning students, and adult students, living in all parts of Ontario and originating from a variety of ethno-cultural backgrounds. They have a wide assortment of aptitudes and career aspirations or are possibly still undecided. Perhaps they were unable to gain admission to university. Once in college, they will join adults upgrading their academic or work skills and learning new skills, some on a full-time basis, others, part-time or in the evening.

Many factors affect a student's choice of college programs. Almost invariably, both school and college personnel identify proximity as the, or a, major influence. Close behind are career interests, employment prospects, admission requirements, the reputation of the college or college program, and the length of the program. Many respondents also note costs, availability of housing, and possibly experience with related programs in secondary school. College promotion activities are a further factor and, on a more personal level, the influence of parents, guidance counsellors, role models and peers.

For some students, college may be an alternative to a university education — their grades were too low for admission — or possibly a "backdoor" means to university entry at a later date. One board notes that for students who lack focus, attending college may provide an immediate alternative to entering the workforce.

In the context of access and success, the College Committee on Student Affairs also develops a picture of specific client groups whose educational needs must also be addressed. They include illiterate Ontarians, basic and general level graduates, women in non-traditional areas, underprepared secondary school graduates requiring remediation or upgrading, people with learning disabilities, developmentally handicapped persons seeking job-oriented programs, recently released psychiatric patients, native students, special needs students, and student populations with increasingly diverse multicultural backgrounds.

In the future, the Committee forecasts, the colleges will be serving an even less homogeneous group. The colleges must be prepared to extend their focus beyond the full-time post-secondary student. Among other things, future clients will require increased part-time and flexible programming. (Other proposals of the Committee are dealt with in appropriate sections of this summary.)

The Durham Board calls for an educational system that is "flexible, tolerant, and forgiving." Such a system would incorporate multiple entry, continuous entry with partial credit grants, college course enrichment opportunities for high school students, college level co-op and similar initiatives.

Moving both operations to a 12-month, continuous operation with heavy co-operative education components would make more cost-effective use of equipment and facilities, while facilitating multiple entry and re-entry programs, according to the Carleton Roman Catholic School Board. The Board adds that employed students need opportunities to take diploma courses through evening, weekend or TV correspondence modes.

Most respondents agree that to meet clients' needs, multiple entry and re-entry points must be part of that flexibility for the foreseeable future. There is some call for continuous intake programs, but the majority of schools suggest that college entry points should at least match the trend toward semestering in the secondary system. One board commented that a February intake date would allow students from semestered schools to consolidate their programs and might also relieve some overcrowding in more competitive programs.

Recognizing that "the more open a system is, the more flexible it is," the Espanola Board notes, nevertheless, that administrative problems place restrictions. The Board adds there must be "some measure of responsible planning by potential students" who want to enter any educational system.

Another board feels the college system is currently failing with regard to multiple entry and re-entry. Algonquin College, however, expresses support for the principle of multiple entry, but notes that "the reality of financial constraints limits the ability of colleges to meet the need."

Access, Competence, and Success

As indicated earlier, by far the major bones of contention for most respondents from the secondary school sector are issues surrounding access of students to the college system, particularly those students studying at the general level. For those dealing with mature students, immigrant students, and various specific groups, access is also a significant matter, both now and for the future.

Respondents address access in terms of available programs, college admission procedures, and prerequisites for admission.

An overwhelming response from both the secondary school and college sectors acknowledges that students studying at different levels of difficulty do not have equal access. Many note the lack of programs for basic level students, who are less inclined to apply and are also vulnerable to failure. The Ontario

Association of Education Administration Officers finds that northern Ontario colleges in particular need faster development of programs for students studying at this level. The Chair of the French Language Section at the Lambton County Board of Education deplores the lack of options for Francophone students to pursue a post-secondary education in French, noting that, to her knowledge, there are no basic level French-language courses whatsoever.

There is generalized concern on the part of school boards at the apparent lack of opportunity at the college level for students who have taken primarily general level courses. More advanced level students are accessing colleges as university entrance becomes more difficult. Most school personnel refer to a perceived preference for an advanced level student and the necessity for more emphasis on the needs of the average basic and general level student. The Halton Board notes that "many people think that advanced level courses are the real prerequisites even if not mentioned."

Whether or not students should have equal access is another matter. One board observes that not all students can be successful in the school system. Another states the unlikelihood that "students with differing 'successes' would seek a "common path forward dependent on academic involvement." Alternatively, yet another board maintains that 80 percent of all available college places should be allocated for general level students.

On the college side, there is acknowledgement that for certain programs — Health Sciences and Technology are most frequently cited — students with advanced level course credentials are given preference. Algonquin College attributes this to the mathematics and sciences required. Fanshawe College, however, notes the high attrition rate among students from general level programs, observing that they do not seem prepared for academic success in these programs. And Fanshawe, although it has no programs specifically for basic level students, would consider applicants on an individual basis.

Nevertheless, the suggestion most frequently repeated by school personnel is that colleges should look to their original mandate to provide a post-secondary option for students in general level programs. The Ontario School Counsellors' Association quotes recent research findings that "9.5 percent of general level grade 9 students go to CAATs, and only half of those graduate. That means a general level grade 9 student has a 1/22 chance of graduating from a CAAT and yet we hold that up to them and their parents as an objective." The Association proposes that advanced level course prerequisites be kept to a minimum, thereby ensuring more success for students in the basic and general levels of study.

The East York Board comments that student follow-up reports issued in 1986 and 1989 "demonstrate the shift of the community colleges' mandate from providing post-secondary education for graduates of secondary schools who have taken general level courses to those who have taken predominantly advanced level courses."

The Board also expresses astonishment at the high drop-out rate (40 – 45%) of its former students who enrolled in community college programs, and stresses willingness to work closely with the colleges to "develop strategies that may begin while the student is still in a secondary school" to improve retention. From another board comes the observation that a buddy system in college might assist the basic level student. In the same context, S.W.A.P. and articulation programs are again viewed optimistically for both basic and general level students.

The Nipigon-Red Rock Board of Education agrees that not all students have equal access but adds, "Nor should they." The Board suggests it is unfair to students and to future employers to pretend a student has "reached a level of competence through 'remedial' and other sleight-of-hand techniques." In Manitoba, the Board notes, guidance counsellors are suggesting a larger co-op component for low general and basic level students and a new rating system similar to the Apprenticeship Act. Under this program, a student could become a qualified "journeyman chambermaid" or "window washer" among more than 100 classifications not formerly registered.

But as one board observed, colleges must provide a trained, skilled workforce to business and industry — "Can we afford not to train all those capable of producing in our Ontario society?" The Dufferin-Peel Roman Catholic Separate School Board further develops this thought: "The advent of the global economy, the greying of our society, and the reduced numbers of skilled people entering the workforce are all creating present and future economic difficulties. The increasing sophistication of jobs is demanding an increased level of literacy, numeracy and skilled training. If Canada is to maintain its economic base, it is incumbent upon secondary and tertiary levels to bring a better focus for their clients in educational activities and career planning. We literally cannot afford to misguide, mislead, or discourage our young people from following a career path that will provide them with challenge and satisfaction and which will maintain our country's social and economic well-being."

Another board feels that college funding methods encourage the selection of students who are likely to remain (successful). In this board's opinion, all students should have equal access in order to provide resources for skilled trades, technology, etc., but colleges may have to specialize in order to meet future needs in such areas.

The London Board comments that general level students should not be placed "at the end of the line." The Board proposes a program which provides for practical upgrading of academic skills, if required, concurrent with basic introductory courses in the specific field of training. "When students have completed a secondary school program, or have been out of school for some time, the likelihood of their having a specific set of goals and being able to recognize the need for preparatory courses is greater than when the decision regarding levels of difficulty in secondary school was originally made."

Similar views on the inter-related issues of competence and success are woven into comments of many school personnel. The Etobicoke Board states that students should be admitted to programs if they have the basic skills necessary for success.

But how is this gauged? According to Fanshawe College, the Grade 12 (OSSD) diploma cannot be relied upon as signifying a level of performance ability, or that students have the "necessary discipline and work ethic."

The Chairman of the Lambton County Board of Education notes some courses are repetitious while fewer general level students are able to enter college directly from Grade 12. "What we are leading to," he says, "is making a Grade 12 diploma (except for the top students) a dead-end diploma, and the overflow from universities filling college spots."

Limitations on the number of advanced level admissions and elimination of advanced level prerequisites are also proposed as partial solutions which might create more options for general level students. However, the issue of prerequisites produced a variety of viewpoints.

Differences Between Stated and Functional Prerequisites

With some exceptions, the majority of school sector respondents do not appear to feel there is a significant difference between stated and functional program prerequisites. As one respondent said, "Sure hope not!"

Boards who do detect a difference cite changes from calendar listings to attrition rates among their reasons. One finds that the disparity works to the detriment of general level students while, from the college viewpoint, Fanshawe College feels that its "stated program prerequisites would be adequate if the functional ability of the general level student in particular in the areas of English and Mathematics were at levels specified in the school curriculum guidelines."

If anything, the schools' argument is with prerequisites per se, and the resulting effect on a student's chance of admission to, or success in certain programs. The Middlesex County Board suggests there should be no penalties for lack of experience in programs, but that those students who do have competency in a certain area be allowed "some element of fast tracking."

One board expresses its concern regarding the lowering of entry requirements in order to fill programs. In the same vein, another board observed that colleges should not pad enrolments for grant purposes (General Arts and Science were specified) but must adhere to the idea of personal suitability for a particular program. Yet another board expresses concern about the admission of students who lack the necessary background in mathematics, especially in technological programs, while the Durham Board points out that some programs may, in fact, be more demanding than the prerequisites would indicate.

Overall, there is a feeling that clarification is necessary, and that prerequisites should be realistic rather than discriminatory. In the view of the Scarborough Board, the reality is that "unnecessary demands of some courses preclude success for some students." The Stormont, Dundas and Glengarry Board proposes co-operative development of prerequisites, with input from both college and secondary school personnel, while the Norfolk Board observes that stated prerequisites are often irrelevant anyway, due to limits on enrolments, and notes inconsistency among college methods for screening applicants.

Centennial College suggests that all levels of the educational spectrum should review published course and program prerequisites to make sure that they are legitimate in the sense of the building block process. "Too frequently," the college observes, "institutions use prerequisites for administrative purposes (such as assuring they will have enough students in each semester) rather than academic ones."

Helping Students to Meet Prerequisites

To help students meet program prerequisites, both schools and colleges have various programs in place. Among those mentioned most frequently by school sector respondents are on-going counselling, remedial and upgrading programs, curriculum modifications, and various information-sharing activities with the colleges. Other strategies include course packaging and the encouragement of students to continue studies in mathematics, English, and sciences as basic requirements.

Fanshawe College describes a mixture of strategies, including pre- and post-admission testing, advance warning to secondary schools of changes in admission requirements, and the development of preparatory programs, particularly in the Technology and Health Sciences areas, for students who are functionally unprepared to enter programs.

Touching on the respective roles of the two systems, one board observes that schools teach learning styles and patterns, and that colleges should be looking for successful learners. There should, therefore, be no curricular prerequisites. Another feels that high technology and business requirements are becoming more difficult for the low level, general level student. The Timiskaming Board suggests the use of provincial videos on such fields as radiography, business, and technology, with information on where to go for what program and what prerequisites are needed.

Roles and Mandates of Schools and Colleges

Along with other members of the educational community, secondary schools and colleges share the responsibility for the eventual supply of a trained workforce to business and industry.

Opinions regarding the most effective and efficient division of this responsibility are almost as numerous as the responses received. Responders comment on current areas of competition between the two systems, their respective roles in terms of meeting the needs of a changing workforce, and possibilities for a collaborative relationship. For some, this entails a re-examination of the purpose of schooling; for others, it demands a pragmatic approach to a complex problem.

Few respondents feel that competition is appropriate. One school board states firmly that schools and colleges "must work together co-operatively. Society cannot afford competition and duplication." The Lakehead Board of Education warns against program overlap between college programs and continuing education programs in the public school system, particularly in less affluent areas. Another mentions trying to control competition to reduce the overlap of expenses while still meeting different student goals.

A high school principal maintains there should be no competition at all. High schools play a preparatory role, whether for college, university, or employment. The college purpose should be the provision of trained people in the technological, business, and service industries. (This area is dealt with in greater detail later on.)

The colleges agree that competition is inappropriate. Algonquin College suggests that colleges continue to encourage students to graduate from high school first, but adds, "Which system best meets the needs of mature students is not clear. Up to now, modified programs in the colleges allowed mature students, often with poor experiences in the school system, to succeed in another system. School systems need to drastically change their approach, if they wish to attract mature students."

The support staff union at Cambrian College feel there is too much duplication of effort, particularly with respect to adult students who should upgrade in the college (adult) environment. On the other hand, a school board states that remedial teaching belongs in the secondary schools. Specifically, adult day school with career counselling, co-op education, and 50/50 programs would allow students to establish relevant ties between education and employment. In business and technology, colleges should respond to a more technically literate population by upgrading their programs and facilities. It is "not appropriate that students become pawns in a tug of war between schools and colleges for enrolment quotas," is the board's opinion.

Grade 12 equivalency is mentioned by a number of school board personnel. There is no diploma and the status may not be accepted by other colleges, says one board. Another questions the fate of the student with equivalency standing who does not continue in college — he or she still has no Grade 12 diploma. One suggestion from a board is that the college system grant credits and the OSSD to mature students more within the environment of the college. At the same time, secondary schools would be empowered to grant advanced placement in college programs. "This would encourage students to remain in school and develop a realistic career plan at an earlier time in their schooling."

However, a small number view competition in a more positive light. "In some aspects of our economy we are in a marketplace economy," observes a school board. "Competition regarding the provision of services will result in efficient operations from which the client benefits." Supporting this position, another board states that current areas of competition are healthy and should lead to better education for students.

For the Durham Board, the issue raises other questions. "How do you define competition? How do you determine what is appropriate? How flexible must a system be to effect change in this area?" And finally, "Who will forfeit curricula?"

The Timiskaming Board addresses a different kind of competition — between colleges and colleges. Colleges should not compete for students, says the board. There is too much repetition from one college to another, resulting in lower standards of acceptance, unfilled programs, and the "demise of unique, successful programs at smaller community-based colleges, e.g. Haileybury School of Mines."

The Norfolk Board feels differently, however. The "unwritten rule" that recruitment does not take place outside the home area can be detrimental for students who do not hear about programs in distant areas.

Meeting the Needs of a Changing Workforce

Respondents take different approaches concerning the comparative roles of the two systems in meeting the needs of a changing workforce. To some, workforce means the people in the workplace; to others, it means the workplace itself — business, industry, and their advancing technologies.

We can expect an older workforce, one board observes, with more women with decreased opportunities in traditional female occupations; fewer workers between the ages of 18 - 24; skilled youth; and more immigrants from Third World countries in need of language and trade or academic skills. To meet their needs, the school and college systems require clearly defined mandates: The schools for the provision of basic skills, and the colleges, with their original mandate in mind, for the provision of specific skills training for the workforce.

Another board agrees that institutions will have to "cater to a broader age group of students, schools taking on the child care role, and colleges opening up for seniors and the handicapped."

Algonquin College observes that its goals and strategies state it will continue to adapt to the current environment and be more adaptable to future environmental change by "increasing the number of existing programs available in a part-time mode; experimenting with alternative schedules for program and course delivery, increasing the availability of remedial learning; establishing and implementing a College policy with respect to clients with special needs,and assessing the feasibility of on-campus child care." George Brown City College proposes courses in the workplace, so that students may earn college credits while studying on the job.

That close ties with the marketplace are essential is a notion common to both secondary and post-secondary sectors. Colleges must be places that train ahead of, or at the very least in step with, industry rather than behind industrial development, says one school board. The SAC President at Sheridan proposes the partial privatization of the college system involving corporate sponsors and investors for related course offerings.

Another board states that both schools and colleges "need better liaison with business to share the responsibilities for retraining and upgrading, and to marry on-the-job experience with with academic components as in apprenticeship." Yet another board identifies the need to provide and encourage people to enrol in technician/technologist/apprenticeship programs. Secondary schools and colleges must anticipate the need to retrain and upgrade and begin to plan for expanded adult education programs. And "both systems should provide the opportunity of free choice for students, but with a clear understanding of national issues surrounding future employment needs."

Nevertheless, there are distinctive views on the individual roles of the two systems. Schools should develop skills in students so they become "employable, responsible, and functional" — communication skills. Colleges should build on this by further developing communication and thinking skills and training for specific jobs, says a secondary school representative. High school is for general education, not job training, according to another. Colleges should provide career focused education. There is also general acceptance of the need for "well rounded students who have problem solving skills, communication abilities, personality qualities that are positive, and an accurate vision of the world around them."

A recurring theme is the image of the college and of technological education. In spite of a strong and increasing demand for trained technicians and skilled workers, a board observes that "students don't like to get their hands dirty." Other respondents identify the stigma attached to non-professional occupations as a problem of the educational system at large, and propose efforts to change attitudes at the Grade 10 and 11 level, before college. Another board comments that high schools themselves should be promoting technology and trades and pointing out the programs which would follow this emphasis at the college level. High schools should increase their efforts to promote colleges as a "different branch of post-secondary education rather than an inferior one," suggests the SAC President at Lambton College.

A related concern expressed by the Carleton Board is the "hierarchical perception" that colleges largely serve the blue-collar needs of society. Also, there is an image of college graduates as being "dead-ended in a career sense." An associated problem is the apparent inability of college graduates to receive university accreditation for college programs.

With Engineering Technology as an example, George Brown City College recommends that colleges and universities be able to give graduates credits and exemptions for similar courses within programs. The college proposes a province-wide system of course credits in high schools, colleges and universities, with equivalencies clearly stated and accepted. A further suggestion is for multiple registrations.

Two submissions concern the establishment of a four-year polytechnic program leading to a baccalaureate degree in technology, equal to — though differing from — a university degree. The Ontario Association of Certified Engineering Technicians and Technologists and Seneca College are proposing advanced studies beyond the diploma level in practical applied engineering.

OACETT suggests that the new degree be made available through the establishment of an Ontario Polytechnic Institute which would co-ordinate its programs with existing plant and faculty at the colleges and universities. Students completing a diploma program at a college would be able to continue into a B.Tech program under the auspices of the OPI. Seneca College, which has recently organized and developed curriculum for a number of post-diploma courses in areas of emerging technology sponsored by the Ministry of Skills Development, proposes that it be designated as a BET institution.

The Durham Board provides a list of suggestions designed to generate further discussion concerning workplace needs. Among these are clarification of the role of the Community College in the community, the establishment of advanced standing policies in colleges, structured career-path counselling for college students, and short-term exchanges between school and college teachers and between college and workplace practitioners.

Towards a Collaborative Relationship

The concept of collaboration between the two systems is far more acceptable to most respondents than competition. There is a general feeling that greater co-operation would also assist schools and colleges in meeting workforce needs. As the main areas for possible co-operation, respondents identify curriculum planning and development in common subjects, sharing facilities and equipment, assessment of the needs of local business and industry, job preparation, and career planning. Other suggestions include extension of Articulation programs, continuing education, and flexible adult education, as well as integrated technological classes and personnel exchanges.

One school board proposes the establishment of regional forums or collaborative committees to review the delivery of programs in a geographic area, as a means to ensure that all appropriate programs are easily available to the community. Similarly, another board suggests the two systems collaborate in the design of a program at their respective levels to support the needs of the community. The example given is manufacturing technology in the Golden Triangle.

Expressing support for the concept of collaboration, a secondary school respondent stresses the need to keep in mind that the two systems serve very different audiences with different needs. High schools must allow students to explore options, while colleges must provide them with specific vocational education/training programs.

In addition, OAEAO refers to the high dropout rate and movement between college programs as a shared responsibility of schools and colleges which could be addressed by more career counselling across the curriculum and more participation in co-op education.

Some respondents do not see a need for collaboration to the extent of joint mandates, however. One board calls for constant communication between the two systems but maintains that colleges should adapt to any curriculum changes at the secondary level to avoid repetition in the first semester, in areas such as wordprocessing and office administration, for example.

Finally, the Ontario Council for University Continuing Education (OCUCE) states its strong desire to collaborate with the colleges concerning accessibility to adult learning opportunities and program delivery. OCUCE extends this proposal to include employers, adding that "the post-secondary system must define the programs it can and should offer to provide trained, updated employees for the workplace. Business and industry may need to work more closely with colleges and universities to define needs and perhaps to provide monetary, equipment, and expert support for job training and updating programs."

Appendix A

An Invitation to Participate
Cover Letter from the Ontario Council of Regents

Ontario Council of Regents
for Colleges of
Applied Arts and Technology

Conseil ontarien
des affaires
collégiales

10th Floor
790 Bay Street
Toronto, Ontario
M5G 1N8

10^e étage
790 rue Bay
Toronto (Ontario)
M5G 1N8

Office of the
Chair

Bureau du
président

(416) 965-4234

May 5, 1989

Dear Colleague:

As you are probably aware, the Minister has asked the college system to begin a study of our role and future directions. This process is called "Vision 2000".

Study Team 5 of this process, "Colleges and the Educational Spectrum", is requesting your response to the questions outlined in the attached document. As a stakeholder in the Ontario college system, the study team would like your views on the relationship between schools and colleges. The information you provide will be used to help this study team formulate themes and options that will help the college system move forward into the 21st century.

You are no doubt very busy, but we hope you will take this opportunity to provide us with your views on the current relationship between schools and colleges, the question of open access to college programs, the role of the colleges in meeting the needs of the changing workforce and the other questions on the attached pages. We need your leadership and guidance.

If we can give you any assistance in preparing your brief for Study Team Five, please let us know.

Sincerely,

Charles E. Pascal
Chair

Atts.

An Invitation to Participate
Letter of Explanation from Study Team 5 Chair

Ontario Council of Regents
for Colleges of
Applied Arts and Technology

Conseil ontarien
des affaires
collégiales

10th Floor
790 Bay Street
Toronto, Ontario
M5G 1N8

10e étage
790 rue Bay
Toronto (Ontario)
M5G 1N8

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Chair

Bureau du
président

(416) 965-4234

AN INVITATION TO PARTICIPATE

VISION 2000

A Review of the Mandate of Ontario's System of Colleges of Applied Arts and Technology

Vision 2000 is a collaborative effort to review the mandate of Ontario's system of colleges of applied arts and technology. This review, initiated by the Minister of Colleges and Universities, is being co-ordinated by the **Ontario Council of Regents for the Colleges of Applied Arts and Technology**, through the Vision 2000 Steering Committee and five Study Teams.

Study Team 5, *Colleges and the Educational Spectrum*, is seeking information and advice from the **educational community**. You are invited to respond to questions about the relationship between schools and colleges. Questions on the following pages may provide a framework for the development of papers or briefs; however, this framework is intended only as a starting point for discussion. Study Team 5 welcomes your advice on all matters of significance to the mandate of the college system.

Briefs should be mailed by June 30, 1989 to:

Penny Moss
Chair, Study Team 5
Ontario Council of Regents
790 Bay Street
10th Floor
Toronto, Ontario
M5G 1N8

Distribution List
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Mr. Garth Jackson	Chair	Senior Adult Training Officers
Mr. Bill Conrod	Chair	Senior Continuing Education Officers
Mr. Roy McCutcheon	Chair	The Committee of Presidents

Appendix B

Submissions to Study Team 5

Name	Title	Organization
David Sterling	President	SAC - Lambton College
Dora Dempster	Chair	Committee on Learning Resources
A. D. Arthur	Supervisor	CFB Borden Board of Education
Raymonde Hanson	V. P. Academic	Algonquin College
Stormont, Dundas & Glengarry		County Board of Education
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Evelyn Dodds	Chair	The Lakehead Board of Education
Andrew Winter	President	SAC — Sheridan College
Allen Wells	Director of Education	The Lambton County Board of Education
D. Burford	Principal	Michipicoten High School
E. C. Mallard	Superintendent of Education	Norfolk Board of Education
B. D. Moore	President	Fanshawe College
H. N. Atkins	Dean of Technology Division	Seneca College
R. A. Dodds	Director of Education	Board of Education for East York
Bill LeMay	Guidance Coordinator	Nipigon-Red Rock District High School
Michael McKenna	Director of Education	Grey Bruce County Board of Education
P. L. Hicknell	Superintendent of Education	Secondary Schools, Waterloo Region Roman Catholic Separate School Board
W. A. Brown	Director of Education	Bruce-Grey County Roman Catholic Separate School Board
Marilyn Stratton-Zimmer	Chair, College Committee on Student Affairs	Algonquin College
Bruce Wells	Executive Director	Ontario Association of Certified Engineering Technicians and Technologists
T. F. McGory	Superintendent of Schools	Timiskaming Board of Education
J. L. Wooden	Principal	Central Huron Secondary School
Jack MacKinnon	Provincial Director	Federation of Catholic Parent-Teachers Association of Ontario
Elizabeth Witmer	Chair	Waterloo County Board of Education
Mary Jane Veinott	Records Officer	Local 656 OPSEU
Robert Esch	Director	The Espanola Board of Education
Trevor Walker	Coordinator	Carleton Roman Catholic School Board
Margaret Landstrom	President	OCUCE
Robert Charlebois	Director	Algonquin Management Centre
Maureen Harte	Program Advisor, Guidance and Counselling	The Board of Education for the City of Etobicoke
Joseph Virdiramo	Director of Education	The Nipigon-Red Rock Board of Education

John Schievink	Guidance Consultant	Durham Board of Education
D. M. Disney	Director of Education	The Victoria County Board of Education
Jack Little	Director of Education	The Board of Education for the City of London
Bill Steadman	Chair	The Lambton County Board of Education
Betty Anderson		Beaver Brae Secondary School
D. G. Rikley	Director of Education	Renfrew County Board of Education
		Collège catholique Samuel Genest
		Pain Court Secondary School
Monique Martel	President	The Lambton County Board of Education
Brian Todd	Superintendent of Instruction	The Northumberland and Newcastle Board of Education
Charlemagne Lamarche	President	Stormont, Dundas & Glengarry
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Allan McLeod	Associate Superintendent of Program	Scarborough Board of Education
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Arthur Duboyce	Superintendent of Schools (Student Services)	Perth County Board of Education
John Schievink	Guidance Consultant	Durham Board of Education
Garth Jackson	Vice-President, Academic	George Brown College
Sandra Thompson	President	Ontario School Counsellors' Association
Pauline Laing	Director of Education	The Durham Board of Education
Bonnie Kehoe	Chair of the Board	The Ottawa Roman Catholic Separate School Board
G. M. Smith	Guidance Department	Central Huron Secondary School
Patricia Carter	Vice-President, Academic	Conestoga College
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